

PERFORMANCE  
IDEAL

# MEXICO SUPER 2

## RS 40, RS 50 & RS 60.

### Balanced Flue Gas Boilers.

### Installation & Service

**CAUTION:** To avoid the possibility of injury during the installation, servicing or cleaning of this appliance, care should be taken when handling edges of sheet steel components.

**Note.** The appliances covered by this book are fitted with HONEYWELL gas controls.

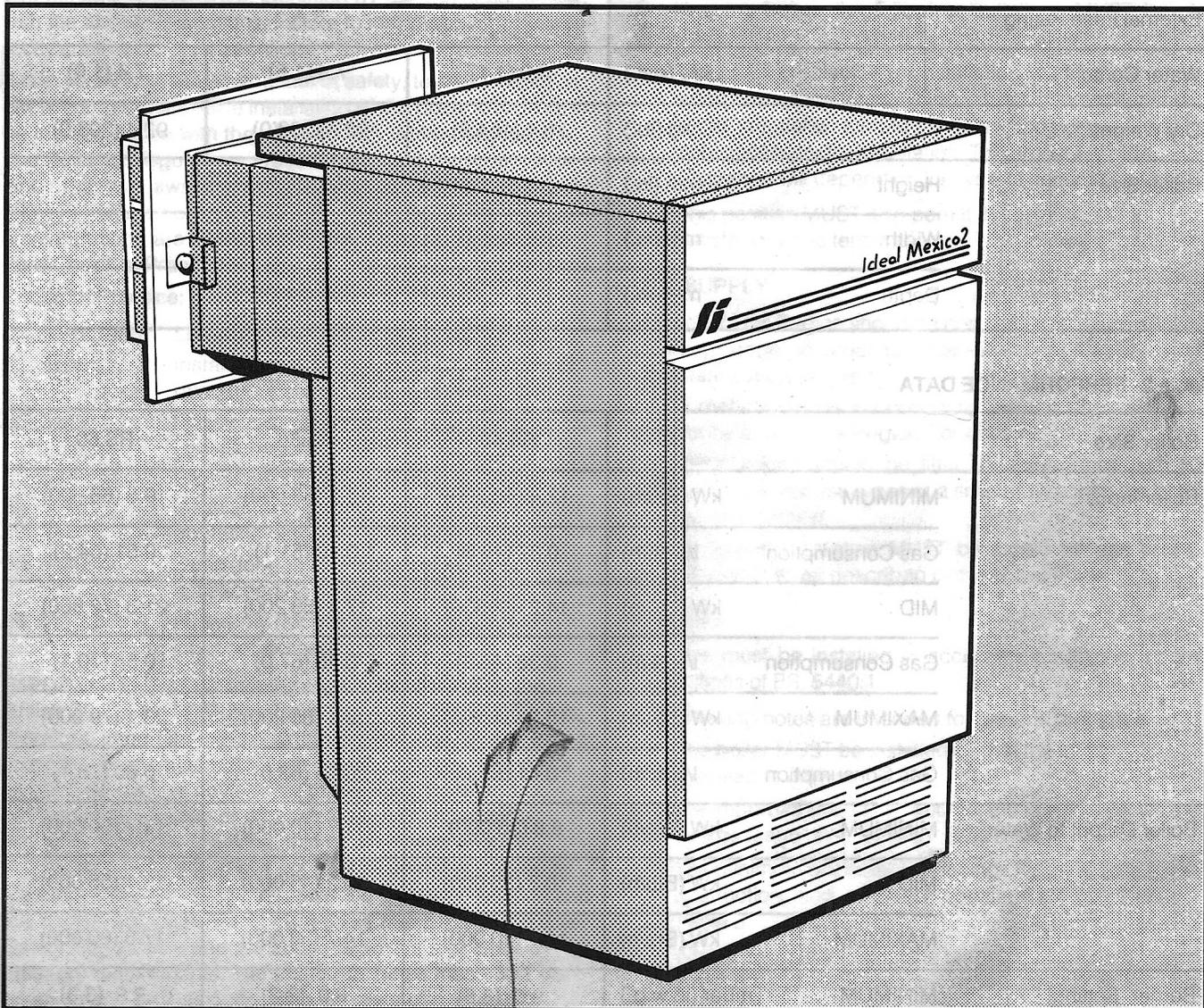
#### Ideal Mexico Super 2

RS 40  
RS 50  
RS 60

#### G.C. Appliance No.

41 429 48  
41 429 49  
41 429 50

**IMPORTANT:** The appliances are for use with **NATURAL GAS ONLY**.



NOTE TO THE INSTALLER: LEAVE THESE INSTRUCTIONS ADJACENT TO THE GAS METER

**BOILERS**  
**Ideal**

**GENERAL****PERFORMANCE DATA**

Table 1- GENERAL DATA

Boiler Size		RS 40	RS 50	RS 60
Main Burner	AEROMATIC	AC 19 / 123 266	AC 19 / 123 267	AC 19 / 123 267
Gas Control Valve	1/2 in. BSP. HONEYWELL V4600 E 1016, 240V			
Burner Injector	BRAY Cat. 103	Size 1150	Size 1500	Size 1800
Pilot Injector	HONEYWELL 38/36 A			
Gas Supply Connection	in. BSP	Rc 1/2 (1/2)		
Number of Boiler Sections		2	3	3
FLOW & RETURN Connections		Rc 1 (1 in. BSP)		
MAXIMUM Static Water Head	m (ft.)	30.5 (100)		
MINIMUM Static Water Head	m (ft.)	1.0 (3.3)		
Electrical Supply		240 V ~ 50 Hz		
External Fuse Rating		3 A		
Water Content	Litre (gal.)	5.0 (1.1)	7.4 (1.6)	7.4 (1.6)
Dry Weight	kg (lb.)	70.4 (164.5)	92.4 (203.0)	92.4 (203.0)
Boiler Size	Height	mm (in.)	850 (33.5)	
	Width	mm (in.)	440 (17.4)	
	Depth	mm (in.)	533 (21.0)	

Table 2- PERFORMANCE DATA

Boiler Size		RS 40	RS 50	RS 60
Boiler Input	MINIMUM	kW (Btu/h)	12.4 (42 200)	15.5 (53 000)
	Gas Consumption	l/s (ft³/h)	0.32 (40.8)	0.40 (51.1)
	MID	kW (Btu/h)	14.2 (48 300)	17.4 (59 200)
	Gas Consumption	l/s (ft³/h)	0.36 (46.3)	0.45 (57.0)
	MAXIMUM	kW (Btu/h)	15.8 (54 100)	19.1 (65 200)
	Gas Consumption	l/s (ft³/h)	0.41 (51.7)	0.50 (63.0)
Boiler Output to Water	MINIMUM	kW (Btu/h)	8.8 (30 000)	11.7 (40 000)
	MID	kW (Btu/h)	10.3 (35 000)	13.2 (45 000)
	MAXIMUM	kW (Btu/h)	11.7 (40 000)	14.7 (50 000)
Burner Setting Pressure (Hot)	MINIMUM	mbar (in.w.g.)	9.0 (3.6)	8.0 (3.2)
	MID	mbar (in.w.g.)	12.0 (4.8)	10.2 (4.1)
	MAXIMUM	mbar (in.w.g.)	15.4 (6.2)	12.4 (5.0)

**Notes:**

1. Gas consumption is calculated using a calorific value of 38.7 MJ/m³ (1038 Btu/ft.³).
2. The appliance is pre-set at the factory to the highest nominal rating.

**INTRODUCTION**

The **Ideal Mexico Super 2 RS 40, RS 50 & RS 60** are floor standing, natural draught, balanced flue gas boilers. They are range rated to provide central heating outputs of 8.8kW (30 000 Btu/h) to 17.6kW (60 000 Btu/h).

The boiler has a cast iron heat exchanger, with an insulating blanket of aluminium foil backed fibreglass, held in place by clips, and is supplied fully assembled, complete with a white enamelled, mild steel casing.

Programmer and Pump Kits, which fit within the casing, are available as optional extras and separate fitting instructions are included with the kits. A door at the top of the casing front panel hinges down-revealing the boiler thermostat control (& programmer if fitted).

The boilers are suitable, as standard, for connection to open vented systems ONLY. An Overheat Thermostat Kit is available to allow the boiler to be used on sealed water systems.

The systems may be pumped or gravity circulating indirect DHW only, pumped central heating only, or pumped central heating combined with either a pumped or gravity circulating indirect DHW circuit.

**Gas Safety (Installation and Use) Regulations, 1984**

It is the law that all gas appliances are installed by competent persons (e.g. CORGI, identified by ) , in accordance with the above Regulations. Failure to install appliances correctly could lead to prosecution.

It is in your own interest, and that of safety, to ensure that the law is complied with. The installation of the boiler MUST also be in accordance with the current I.E.E. Wiring Regulations, The Building Regulations (1985), Building Standards (Scotland), the Bye Laws of the Local Water Undertaking and any relevant requirements of the Local Authority. Detailed recommendations are contained in the following British Standard Codes of Practice.

**Codes of Practice:**

BS. 6891:1988	Low pressure installation pipes.
BS. 6798	Installation of gas fired hot water boilers of rated input not exceeding 60 kW.
BS. 5449:1	Forced circulation hot water systems (small bore and microbore domestic central heating systems).
BS. 5546	Installation of gas hot water supplies for domestic purposes (2nd Family Gases).
BS. 5440:1	Flues (for gas appliances of rated input not exceeding 60 kW).
BS. 5440:2	Air supply (for gas appliances of rated input not exceeding 60 kW).

**IMPORTANT.** This appliance range is certificated by the British Standards Institution for safety and performance. It is, therefore, important that no external control devices, e.g. flue dampers, economisers etc., are directly connected to these appliances - unless covered by these 'Installation and Servicing' instructions or otherwise recommended by Caradon Ideal Ltd. in writing. If in doubt please enquire. Any direct reconnection of a control device not approved by Caradon Ideal Ltd. could invalidate the B.S.I. certification and the normal appliance warranty. It could also infringe the Gas Safety Regulations and the above regulations or other statutory requirements. Manufacturers notes must NOT be taken, in any way, as over-riding statutory obligations.

**LOCATION OF BOILER**

The floor MUST be flat and level, and of a suitable load bearing capacity. The boiler may be fitted on a combustible floor, and insulation, other than that required by the Local Authority and Building Regulations, is NOT necessary.

The boiler MUST be installed against an external wall & the back of the boiler casing may be fitted up to the wall.

THE BOILER IS NOT SUITABLE FOR EXTERNAL INSTALLATION.

**INTRODUCTION- FLUEING**

**IMPORTANT NOTICE.** If the boiler is to be fitted in a timber framed building it should be fitted in accordance with the British Gas publication 'Guide for Gas Installation in Timber Framed Housing', reference DM2. If in doubt, advice must be sought from Caradon Ideal Ltd.

The boiler may be installed in any room or internal space, although particular attention is drawn to the requirements of the current I.E.E. Wiring Regulations and, in Scotland, the electrical provisions of the Building Regulations applicable in Scotland with respect to the installation of the boiler in a room or internal space containing a bath or shower.

Where a room sealed appliance is installed in a room containing a bath or shower then the appliance & any electrical control utilising mains electricity should be situated so that it cannot be touched by a person using the bath or shower.

Where installation will be in an unusual location special procedures may be necessary and BS. 6798 gives detailed guidance on this aspect. A compartment used to enclose the boiler MUST be designed and constructed specially for the purpose. Details of essential features of cupboard/compartment design, including airing cupboard installations, are given in BS. 6798.

In siting the boiler, the following limitations MUST be observed:

1. The position selected for installation MUST allow adequate space for servicing in front of the boiler and for air circulation around the boiler. Side clearance is only necessary for installation. The amount of side clearance will depend on the type of connection used.
2. This position MUST also permit the provision of a satisfactory flue termination.

**GAS SUPPLY**

The Local Gas Region should be consulted, at the installation planning stage, in order to establish the availability of an adequate supply of gas.

A gas meter can only be connected by the Local Gas Region, or by a local Gas Region Contractor.

Installation pipes should be fitted in accordance with BS 6891:1988. Do not use pipes of a smaller size than the boiler inlet gas connection.

The complete installation MUST be tested for gas soundness and purged as described in the above Code.

**FLUEING**

The flue must be installed in accordance with the recommendations of BS. 5440:1.

The following notes are intended for general guidance.

1. The boiler MUST be installed so that the terminal is exposed to external air.
2. It is important that the position of the terminal allows the free passage of air across it at all times.
3. The minimum acceptable spacings from the terminal to obstructions and ventilation openings are specified in Table 3.
4. Where the lowest part of the terminal is fitted less than 2m (6.6 ft.) above a balcony, above ground, or above a flat roof to which people have access, the terminal MUST be protected by a purpose designed guard. Terminal guards are available from:  
Quinnel, Barret & Quinnel Ltd., 884 Old Kent Road, London, SE 15  
and from,  
Tower Flue Components Ltd., Vale Rise, Tonbridge, Kent TN9 1TB.
5. Where the terminal is fitted within 850mm (34in) of

# GENERAL

a plastic or painted gutter, or 450 mm (18 in.) of painted eaves, an aluminium shield at least 750 mm (30 in.) long should be fitted to the underside of the gutter or painted surface.

- The air inlet/ products outlet duct and the terminal of the boiler MUST NOT be closer than 25 mm (1 in.) to combustible material. Detailed recommendations on protection of combustible material are given in BS. 5440:1 1978, sub-clause 20:1.

**IMPORTANT.** It is absolutely ESSENTIAL to ensure, in practice, that products of combustion, discharging from the terminal, cannot re-enter the building, or any other adjacent building, through ventilators, windows, doors, other sources of natural air infiltration, or forced ventilation/air conditioning.

*If this should occur, the appliance MUST be turned OFF IMMEDIATELY and the Local Region of British Gas plc. called to investigate.*

## TERMINAL

The terminal assembly can be adapted to accommodate various wall thicknesses, refer to Frames 10 & 11 (Installation).

**Table 3**

Terminal Position	Minimum Spacing
1. Directly below an openable window, air vent or other ventilation opening.	300 mm (12 in.)
2. Below guttering, drain pipes or soil pipes.	300 mm (12 in.)
3. Below eaves.	300 mm (12 in.)
4. Below balconies or a car port roof.	600 mm (24 in.)
5. From vertical drain pipes or soil pipes.	75 mm (3 in.)
6. From internal or external corners.	600 mm (24 in.)
7. Above adjacent ground, roof or balcony level.	300 mm (12 in.)
8. From a surface facing the terminal.	600 mm (24 in.)
9. From a terminal facing a terminal.	600 mm (24 in.)
10. From an opening in a car port (eg. door or window) into dwelling.	1200 mm (48 in)
11. Vertically from a terminal on the same wall.	1500 mm (60 in)
12. Horizontally from a terminal on the wall.	300 mm (12 in.)

## AIR SUPPLY

Detailed recommendations for air supply are given in BS. 5440:2.

The following notes are intended for general guidance:

- It is NOT necessary to have a purpose provided air vent in the room or internal space in which the boiler is installed.
- If the boiler is to be installed in a cupboard or compartment, permanent air vents are required (for cooling purposes) in the cupboard/ compartment, at both high and low levels. The air vents must either communicate with room/ internal space, or be direct to outside air. The minimum effective areas of the permanent air vents, required in the cupboard/ compartment, are specified as follows and are related to the maximum rated heat input.

# FLUEING- WATER CIRCULATION

## Notes.

- Both air vents MUST communicate with the same room or internal space, or MUST be on the same wall to outside air.
- In siting the air vents care must be taken to avoid the freezing of pipework.

**Table 4- RS 40**

Position of air vent	Air from room/ internal space	Air direct from outside
HIGH LEVEL cm <sup>2</sup> (in <sup>2</sup> )	143 (23)	72 (12)
LOW LEVEL cm <sup>2</sup> (in <sup>2</sup> )	143 (23)	72 (12)

**Table 5- RS 50**

Position of air vent	Air from room/ internal space	Air direct from outside
HIGH LEVEL cm <sup>2</sup> (in <sup>2</sup> )	173 (27)	87 (14)
LOW LEVEL cm <sup>2</sup> (in <sup>2</sup> )	173 (27)	87 (14)

**Table 6- RS 60**

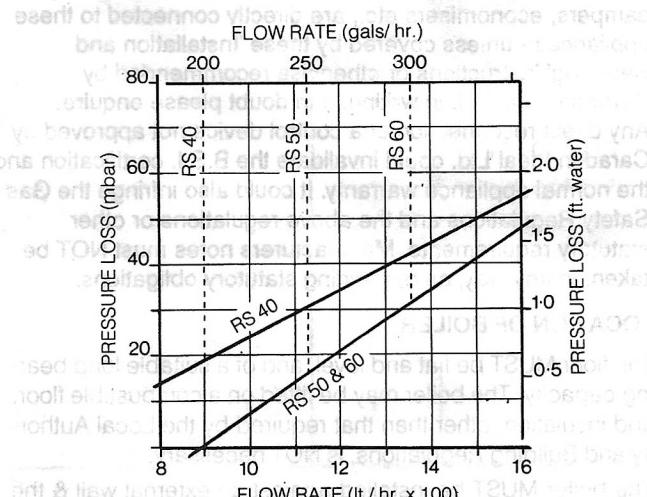
Position of air vent	Air from room/ internal space	Air direct from outside
HIGH LEVEL cm <sup>2</sup> (in <sup>2</sup> )	208 (33)	104 (17)
LOW LEVEL cm <sup>2</sup> (in <sup>2</sup> )	208 (33)	104 (17)

## WATER CIRCULATION SYSTEM

The boiler must NOT be used for direct hot water supply or for sealed systems. The boiler is suitable for connection to pumped open vent central heating systems, pumped central heating combined with pumped or gravity indirect domestic hot water supply systems.

**Note:** The boiler is NOT suitable for gravity heating systems. The hydraulic resistances of the boilers at MAXIMUM OUTPUT with 11°C 20°F temperature differentials are shown in the graph below.

## WATER FLOW RATE & PRESSURE LOSS



Dotted lines indicate flow rates equivalent to a temperature rise of 11°C (20°F)

## GENERAL

## WATER CIRCULATION- ELECTRICAL SUPPLY

The central heating system should be in accordance with the relevant recommendations given in BS.6798 and in addition, for small bore and microbore systems BS.5449:1.

The domestic hot water system, if applicable, should be in accordance with the relevant recommendations of BS.5546. Copper tubing, to BS 2871:1, is recommended for water carrying pipework.

The hot water storage cylinder MUST be of the indirect type and should preferably be manufactured of copper. Single feed indirect cylinders are not preferred. The hot water cylinder, and ancillary pipework, not forming part of the useful heating surface, should be lagged to prevent heat loss and any possible freezing- particularly where pipes run through roof spaces and ventilated under floor spaces, in accordance with the Water Bye Laws.

The boiler MUST be vented. If venting cannot be done via a flow connection, a separate vent MUST be fitted by the Installer.

Draining taps MUST be located in accessible positions which permit the draining of the whole system, including the boiler & hot water storage vessel. Draining taps should be at least 1/2 in. nominal size & be in accordance with BS.2879. If required a drain tap (not supplied) may be fitted to an unused bottom (1 in. BSP) tapping on the front of the boiler.

### ELECTRICAL SUPPLY

Wiring external to the appliance MUST be in accordance with the current I.E.E. Wiring Regulations and any Local Regulations which apply.

The boiler is supplied for 240 V ~ 50 Hz, Single Phase. Fuse rating is 3A.

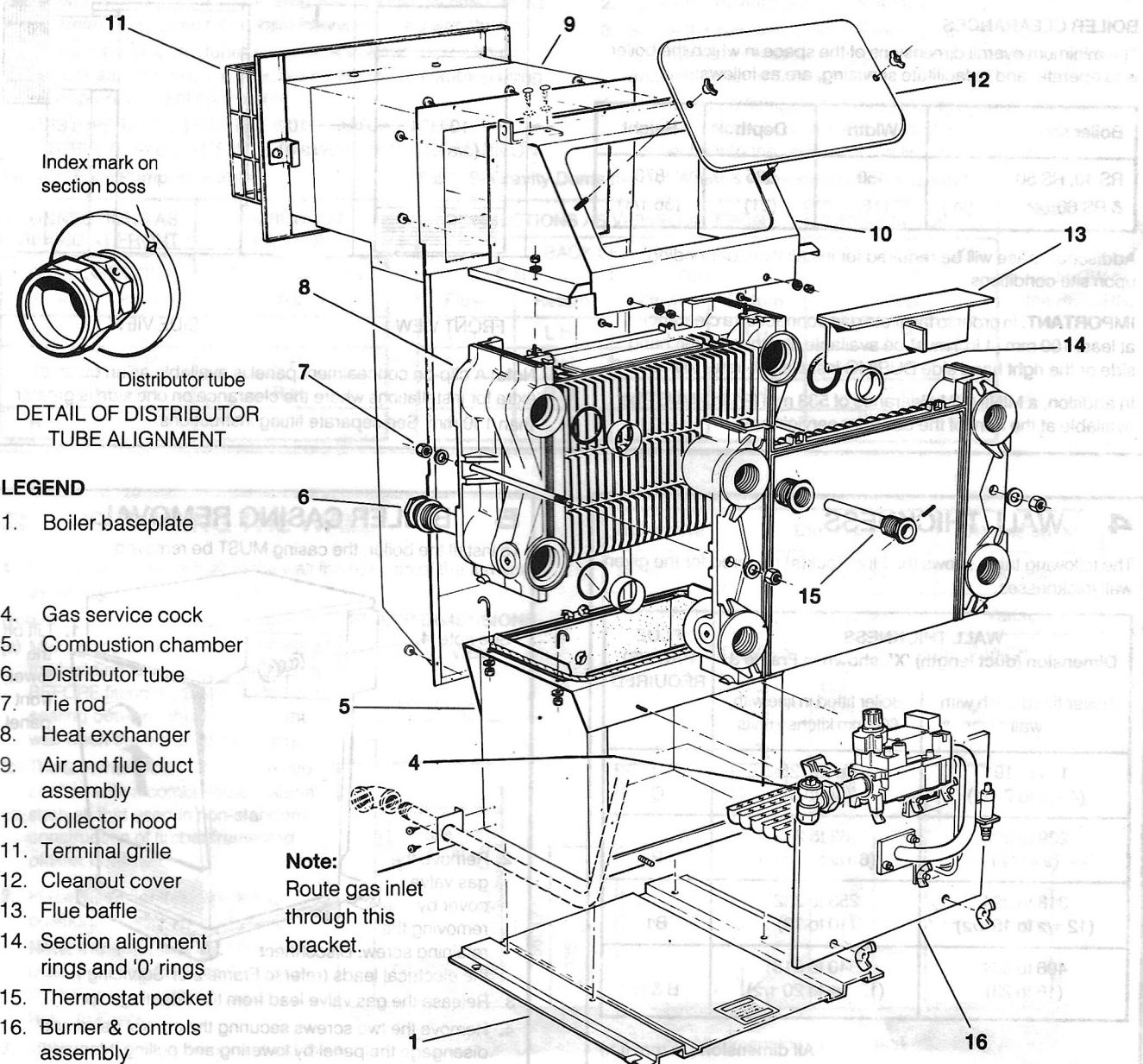
The method of connection to the mains electricity supply MUST facilitate complete electrical isolation of the boiler, preferably by using a fused 3-pin plug & shuttered socket outlet, both complying with the requirements of BS.1363.

Alternatively, a fused double-pole switch having a 3 mm (1 mm.) contact separation in both poles and serving only the boiler, may be used.

The point of connection to the mains should be readily accessible. For bathroom installations the point of connection to the mains MUST be situated outside the bathroom.

**Note.** Where a room sealed appliance is installed in a room containing a bath or shower, the appliance, any electrical switch or appliance control utilising mains electricity should be so situated such that it cannot be touched by a person using the bath or shower.

### 1 BOILER ASSEMBLY- Exploded View. Ideal Mexico 2 RS 50 & RS 60 shown (with casing removed)



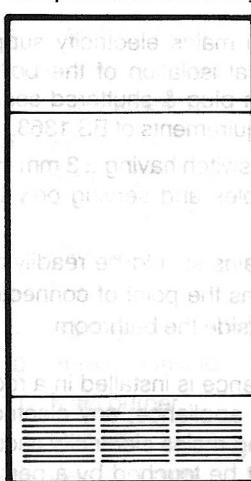
**2 UNPACKING**

The boiler is supplied fully assembled in one pack 'A', together with either one or two of four packs B, B1, C or D. Packs B, B1, or C contain the flue terminal appropriate to the wall thickness. Pack D contains the flue terminal extensions.

Unpack & check the contents.

**PACK 'A' CONTENTS**

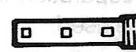
Complete boiler assembly

**HARDWARE PACK CONTENTS**

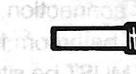
1 in. BSP plugs, 6 off



1 in. x 1/2 in. BSP reducing bush, 1 off



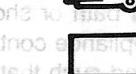
Distributor tube



Thermostat pocket,  
1 off



Thermostat clip (RS 50  
& 60 only), 1 off



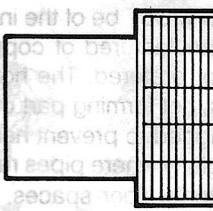
Thermostat retaining pin



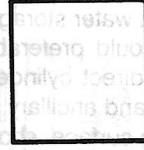
Output setting label

**PACK 'B', 'B1' & 'C'  
CONTENTS**

Flue terminal assembly

**PACK 'D'  
CONTENTS**

Flue terminal extension



Sachet of sealing mastic,



Adhesive tape

**3 FLOOR MOUNTING & BOILER CLEARANCES****FLOOR MOUNTING**

1. The floor must be flat, level & of suitable load bearing capacity.
2. The back of the boiler may be fitted up to the wall.

**BOILER CLEARANCES**

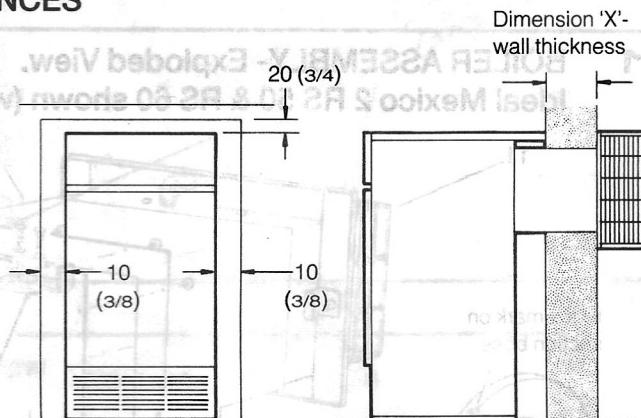
The minimum overall dimensions of the space in which the boiler is to operate, and to facilitate servicing, are as follows:

Boiler size	Width	Depth	Height
RS 40, RS 50 & RS 60	460 (18)	535 (21)	870 (36 1/4)

Additional space will be required for installation, depending upon site conditions.

**IMPORTANT.** In order to facilitate gas connection a clearance of at least 100 mm (4 in.) must be available at either the left hand side or the right hand side DURING installation- refer to Frame 6.

In addition, a MINIMUM clearance of 533 mm (21 in.) MUST be available at the front of the boiler for servicing.



FRONT VIEW

SIDE VIEW

**Note:** A clip-on concealment panel is available as an optional extra for installations where the clearance on one side is greater than 110 mm. See separate fitting instructions

**4 WALL THICKNESS**

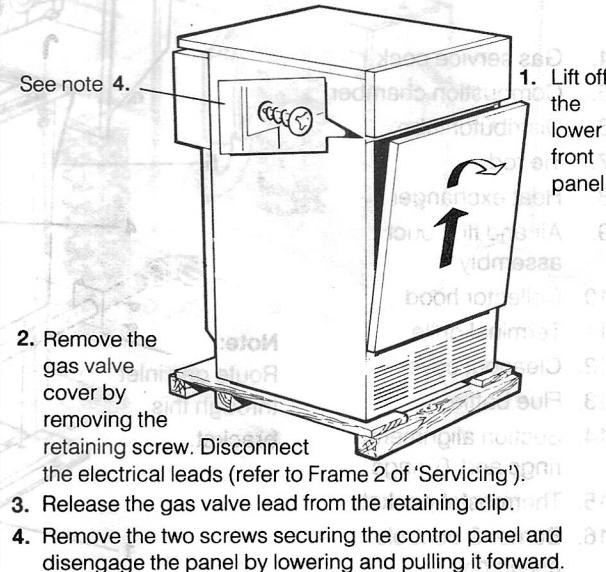
The following table shows the Flue Pack(s) required for the given wall thicknesses.

WALL THICKNESS Dimension (duct length) 'X', shown in Frame 3		FLUE PACK(S) REQUIRED
Boiler fitted flush with wall	Boiler fitted in line with 600 mm kitchen units	
114 to 191 (4 1/2 to 7 1/2)	up to 125 (up to 5)	C
229 to 305 (9 to 12)	163 to 242 (6 1/2 to 9 1/2)	B
318 to 394 (12 1/2 to 15 1/2)	253 to 332 (10 to 13)	B1
406 to 584 (16 to 23)	340 to 518 (13 1/2 to 20 1/2)	B & D

All dimensions in mm (in.)

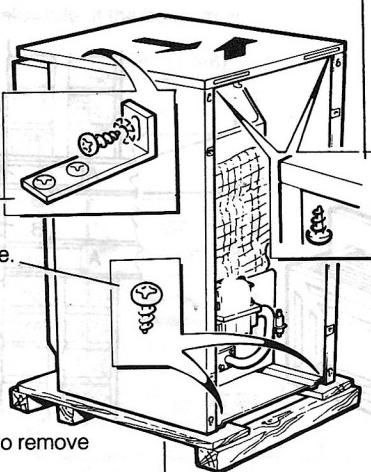
**5 BOILER CASING REMOVAL**

To install the boiler, the casing MUST be removed.



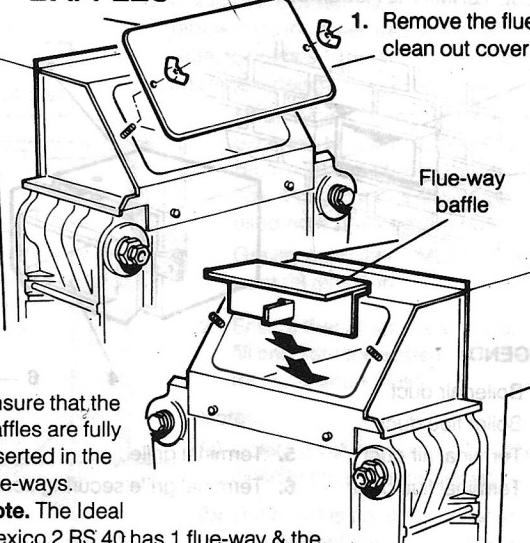
## 6 BOILER CASING REMOVAL, cont.

5. Remove the 2 screws fixing the top panel to the side panels.
6. Draw the top panel forward & lift it off the boiler.
7. Remove the 2 screws securing the L.H. side panel to the flue collector & baseplate.
8. Pull the panel forward, lifting it clear of the locating pegs & remove it from the boiler.
9. Repeat steps 7 & 8 to remove the R.H. side panel.
10. The boiler is held to the packaging base by 4 M6 hex head screws. Remove the front screws, slacken the rear screws & remove the boiler from the packaging base.



## 7 CHECKING THE FLUE-WAY OR BAFFLES

1. Remove the flue clean out cover.
  2. Ensure that the baffles are fully inserted in the flue-ways.
- Note.** The Ideal Mexico 2 RS 40 has 1 flue-way & the RS 50/RS 60 models have 2 flue-ways.



## 8 PREPARING THE BOILER

**Notes:** Before placing the boiler in the selected position, any gas and water connections at the rear of the boiler should be prepared due to the possible lack of access. (See note on Fig. 1 on Page 6). If an optional Pump Kit is to be used then it must be fitted at this stage. Refer to separate fitting instructions included with the kit.

1. Screw the distributor tube (supplied with a 1 in. BSP x 28mm copper adaptor) into the selected heating return tapping using an appropriate jointing material.

IT IS IMPERATIVE THAT THE INDEX MARK ON THE DISTRIBUTOR BUSH IS IN ALIGNMENT WITH THE MARK ON

Table 7- Fully Pumped Systems

CONNECTIONS AS VIEWED AT FRONT		THERMOSTAT POSITION	
BACK SECTION		FRONT SECTION	
Flow	Return	Top	
L.H.	L.H.	L.H.	
L.H.	R.H.	L.H.	
R.H.	R.H.	R.H.	
R.H.	L.H.	R.H.	

Table 8- Gravity Domestic Hot Water & Pumped Central Heating

CONNECTIONS AS VIEWED AT FRONT				THERMOSTAT POSITION
BACK SECTION				FRONT SECTION
C.H.		D.H.W.		Top
Flow	Return	Flow	Return	
L.H.	L.H.	R.H.	R.H.	L.H.
L.H.	R.H.	R.H.	L.H.	L.H.
R.H.	R.H.	L.H.	L.H.	R.H.
R.H.	L.H.	L.H.	R.H.	R.H.

**Note.** The pump may be fitted to the FLOW or the RETURN.

## 9 PREPARING THE WALL

1. Cut the appropriate hole in the wall for insertion of the terminal assembly.

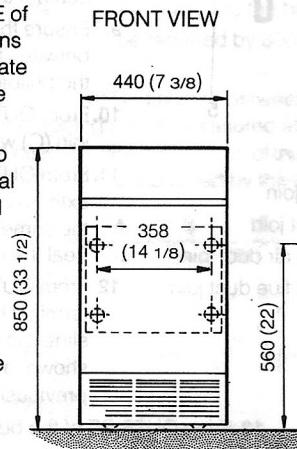
**Notes:**

- (a) Make good the hole on the INSIDE of the building to the given dimensions BEFORE fitting the boiler, to facilitate sealing between the terminal & the wall when the boiler is in position.
  - (b) The terminal MUST NOT come into contact with a combustible material such as that used in non-standard construction of timber frame and plaster board etc.
2. Place the boiler in the selected position.

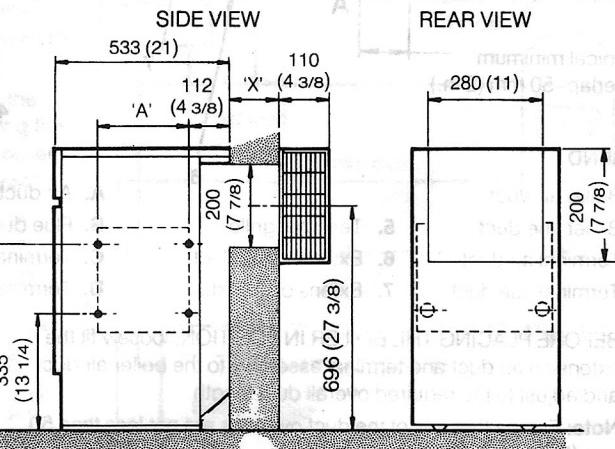
**Note:** If an extension duct D is to be fitted, this must be done BEFORE the boiler is placed in position. Refer to Frame 11.

3. Make good the brickwork around the air duct.

### BOILER DIMENSIONS

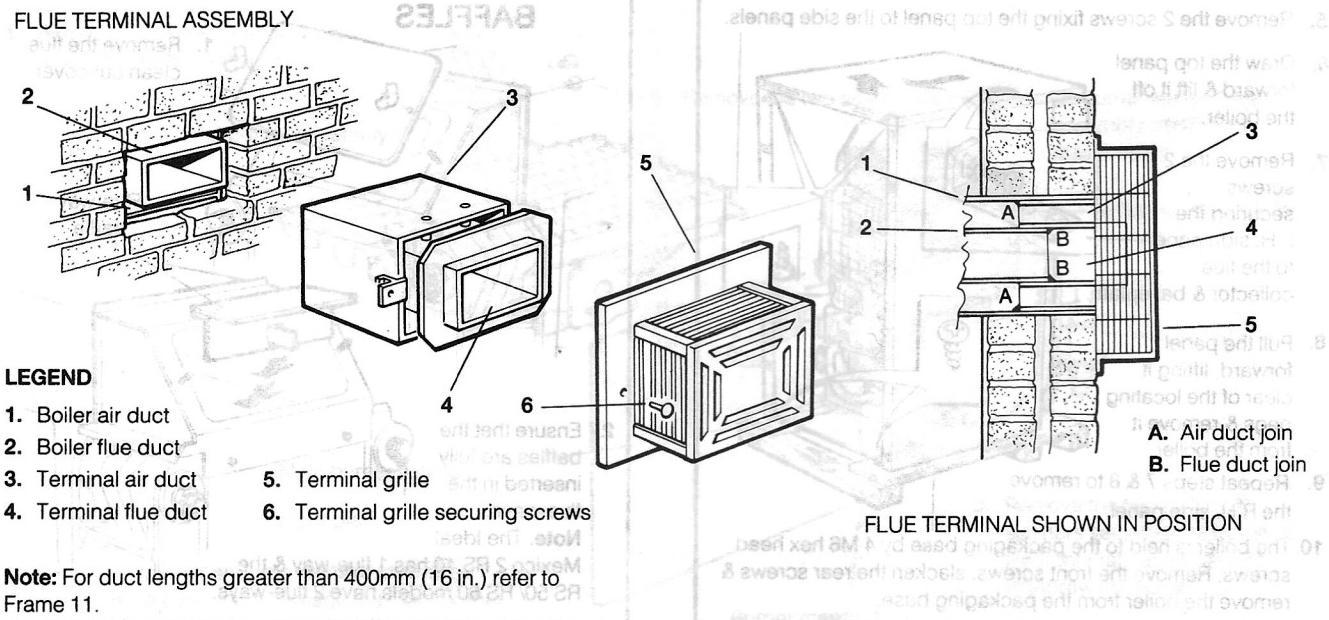


Boiler size	Dimension 'A'	Dimension 'X'
RS 40	145 (5 3/4)	Variable
RS 50 & RS 60	218 (5 5/8)	Variable



All dimensions in mm (in.)

## **10 FITTING THE FLUE ASSEMBLY: Duct lengths up to 400 mm (16 in.)**

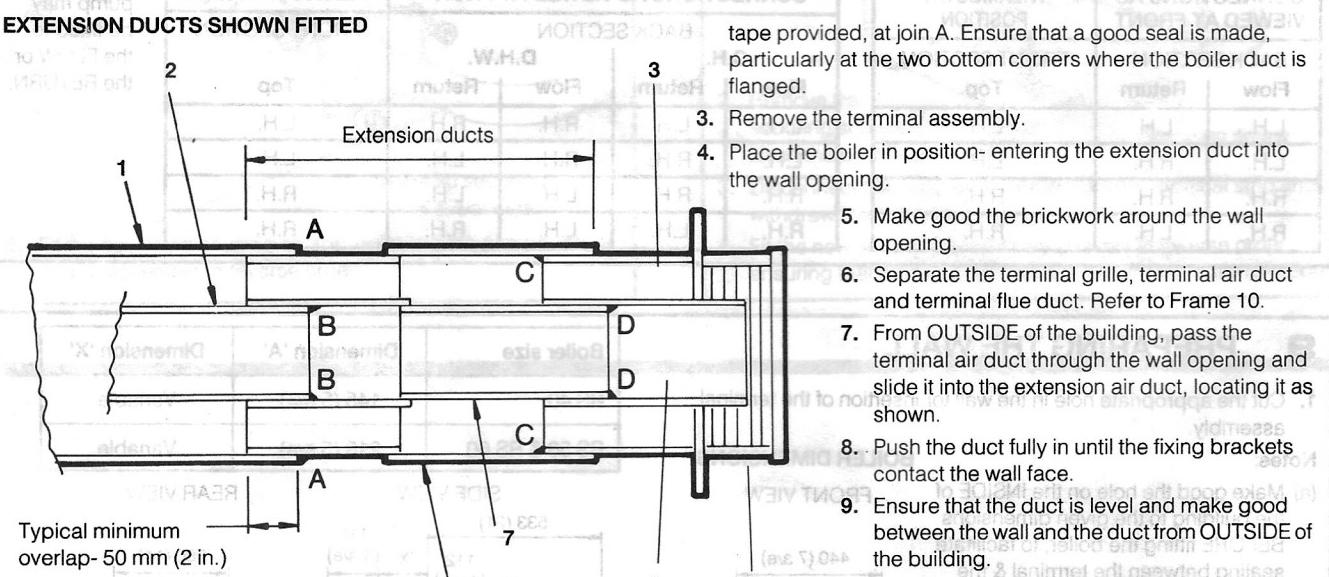


**Note:** For duct lengths greater than 400mm (16 in.) refer to Frame 11.

1. Remove the two securing screws and separate the terminal grille from the terminal assembly.
  2. Remove the four securing screws and separate the terminal flue duct from the terminal air duct.
  3. From OUTSIDE of the building, pass the terminal air duct through the wall opening and slide it into the boiler air duct, locating it as shown.
  4. Push the terminal air duct fully in- until the fixing brackets contact the wall face.
  5. Make good between the wall and duct, from OUTSIDE of the building.

6. From OUTSIDE the building seal the air duct join (A) with the mastic provided.
  7. From OUTSIDE of the building, pass the terminal flue duct through the wall opening and slide it into the boiler flue duct. Locate it as shown and fix it in position with the four screws previously removed.
  8. From OUTSIDE of the building seal the flue duct join (B) with the mastic provided.
  9. Fasten the terminal grille to the duct assembly.

## **11 EXTENSION DUCTS:** Duct lengths greater than 400 mm (16 in.)



Typical minimum overlap- 50 mm (2 in.)

## LEGEND

- 6**

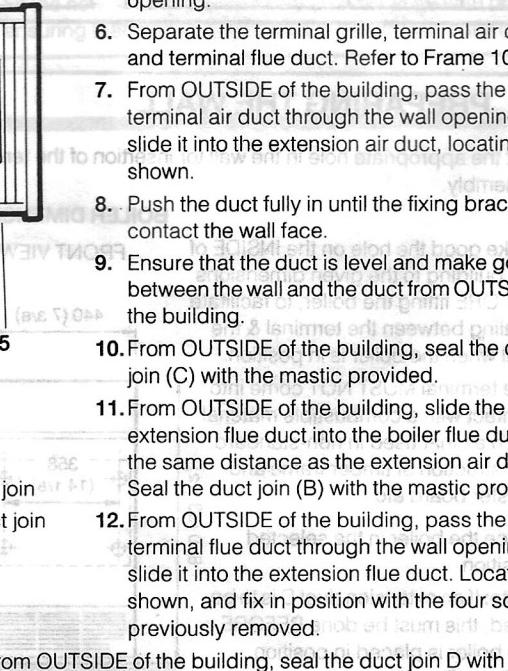
  - 1. Boiler air duct
  - 2. Boiler flue duct
  - 3. Terminal air duct
  - 4. Terminal flue duct
  - 5. Terminal grille
  - 6. Extension air duct
  - 7. Extension flue duct

1. BEFORE PLACING THE BOILER IN POSITION, loosely fit the extension air duct and terminal assembly to the boiler air duct and adjust to the required overall duct length.

**Note:** Ensure that any of the duct overlaps are not less than 50 mm (2 in.)

- 2.** Secure the extension air duct in position, using the adhesive.

tape provided, at join A. Ensure that a good seal is made, particularly at the two bottom corners where the boiler duct is flanged.

- 
  3. Remove the terminal assembly.
  4. Place the boiler in position- entering the extension duct into the wall opening.
    5. Make good the brickwork around the wall opening.
    6. Separate the terminal grille, terminal air duct and terminal flue duct. Refer to Frame 10.
    7. From OUTSIDE of the building, pass the terminal air duct through the wall opening and slide it into the extension air duct, locating it as shown.
    8. Push the duct fully in until the fixing brackets contact the wall face.
    9. Ensure that the duct is level and make good between the wall and the duct from OUTSIDE of the building.
  - 5
    10. From OUTSIDE of the building, seal the duct join (C) with the mastic provided.
    11. From OUTSIDE of the building, slide the extension flue duct into the boiler flue duct to the same distance as the extension air duct. Seal the duct join (B) with the mastic provided.
    12. From OUTSIDE of the building, pass the terminal flue duct through the wall opening & slide it into the extension flue duct. Locate it as shown, and fix in position with the four screws previously removed.
    13. From OUTSIDE of the building, seal the duct join D with the mastic provided.
    14. Fasten the terminal grille to the duct assembly.

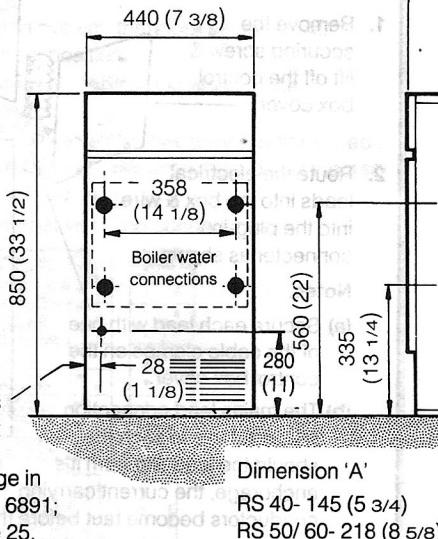
**12 GAS CONNECTION**

1. A MINIMUM working gas pressure of 20 mbar (8 in.w.g.) MUST be available at the boiler inlet.

2. Extend a gas supply NOT LESS THAN 15 mm (1/2 in.) OD to the boiler & connect to the gas cock situated at the front L. H. side of the boiler.

(See note on Fig.1 on Page 6).

3. Test the gas inlet installation for soundness & purge in accordance with BS. 6891; 1988. Refer to Frame 25.

**13 WATER CONNECTION**

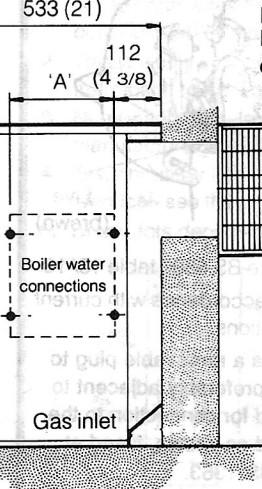
1. Connect the system flow & return pipework to the boiler as appropriate. Refer to Frames 14 & 15 for guidance on system design.

**Note:** When the required output exceeds 14.4 kW (49 000 Btu/h)- 28 mm (1in) pumped flow & return pipes should be used both to & from the boiler. Gravity connections MUST be at least 28 mm (1 in.).

2. Ensure that all valves are open, fill and vent the system and check for water soundness.

**Notes:**

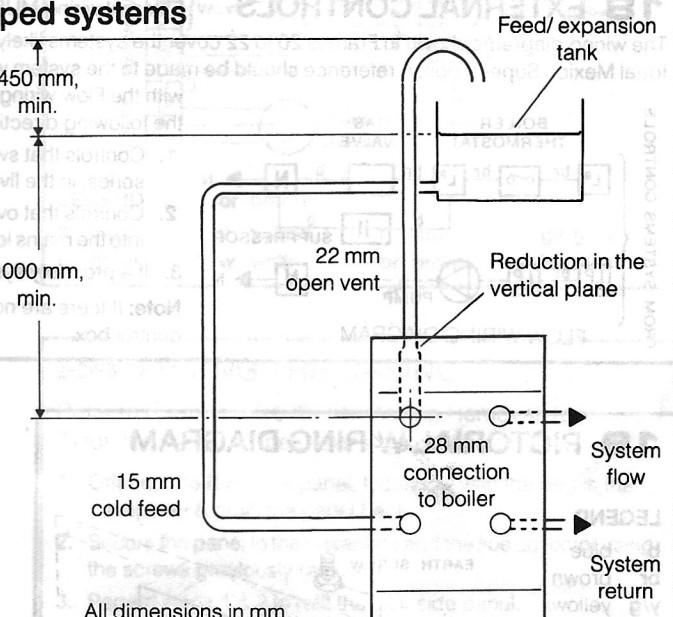
- (a) Isolating valves must be fitted as close to the pump as possible.  
 (b) The boiler is not suitable for use with a direct hot water cylinder or a sealed system.

**14 MINIMUM REQUIREMENTS. Fully pumped systems**

- Open vent and cold feed connections must be made to the boiler flow & return tappings according to the options shown in Frame 8.
- The boiler is assumed to be the highest point of the circulating system.
- The circulating pump is positioned on the FLOW, & the vertical distance, between the pump & feed/ expansion tank, must comply with the Pump Manufacturer's minimum requirements, 1000 mm, to avoid cavitation. Should these conditions not apply, either lower the pump position, or raise the feed/ expansion tank above the minimum requirements of Caradon Ideal Ltd.
- The water velocity through the boiler flow/ return pipes is assumed to be below 1 m/s (3 ft./s), whilst the pump flow rate is set to provide a temperature difference of 11°C (20°F) across the boiler flow/ return, at design input.
- This information is intended as a GUIDE ONLY and cannot take into account instantaneous changes in head causes by the operation of motorised valves, pumps etc.

Due allowance MUST be made if surging is liable to occur.

If in any doubt, contact Caradon Ideal Ltd.

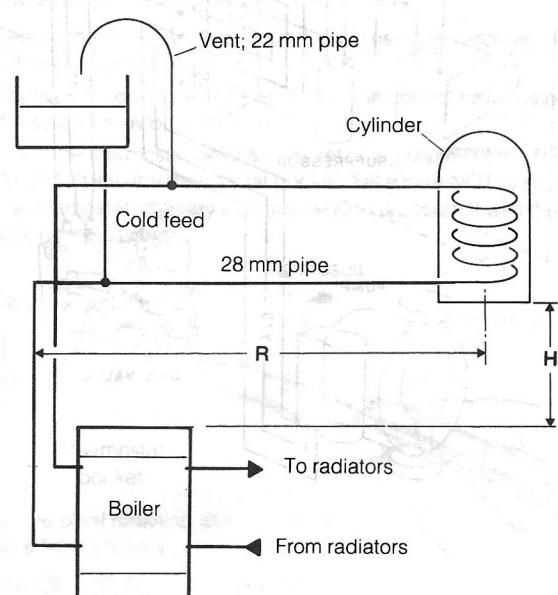
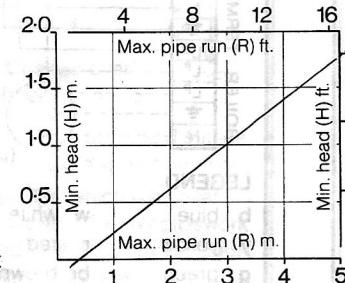
**15 GRAVITY HOT WATER & PUMPED CENTRAL HEATING**

- Separate flow & return connections are used for each service. All possible configurations are given in Frame 8 & ONLY those shown should be used.
- The schematic pipework graph is based on the assumption that NO MORE than 8 elbows are used in the gravity loop, including entry to the boiler.
- For each extra elbow in excess of 8, (R) MUST be reduced by 300 mm (12 in.) or (H) increased by 100 mm (4 in.).
- Whatever value is selected for 'R', (the horizontal distance between the centre line of the cylinder & the boiler tappings used- measured along the pipe run) the value of 'H' (the verticle distance between the top of the boiler & the base of the cylinder) MUST be at least that indicated by the graph.

**Notes.**

- (a) Flow & return pipes should rise vertically on leaving the boiler.
- (b) Horizontal pipes should be ABOVE ceiling level & as short as possible.
- (c) A MINIMUM inclination of 25 mm per 3 m run (1 in. per 10 ft.) is required to avoid air locks.

If the above conditions cannot be met pumped primaries should be used.



## 16 ELECTRICAL CONNECTIONS

**WARNING:** The appliance MUST be efficiently earthed.

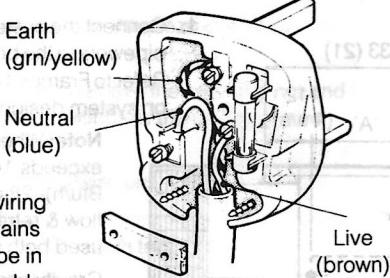
A mains supply of 240 V ~ 50 Hz is required.

All external controls & wiring MUST be suitable for mains voltage. Wiring should be in 3-core PVC insulating cable, NOT LESS than 0.75 mm<sup>2</sup> (24 x 0.2 mm) to BS.6500 table 15/ 16.

Wiring external to the boiler MUST be in accordance with current I.E.E. Wiring Regulations & Local Regulations.

The supply connection may be made via a removable plug to an unswitched shunted socket/outlet, preferably adjacent to the boiler, & should such a plug be used for connection to the mains, it must be of the 3-pin type-wired as shown, fused at 3A & comply with the requirements of BS.1363.

Alternatively, a fused double-pole switch, having a 3mm contact separation in both poles, serving only the boiler & its external controls may be used.



## 17 INTERNAL WIRING

Flow & pictorial wiring diagrams are shown in Frames 18 & 19. A schematic wiring diagram is included on the Lighting Instruction label.

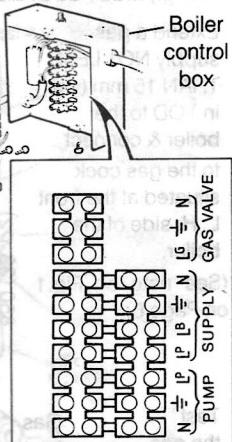
1. Remove the securing screw & lift off the control box cover.

2. Route the electrical leads into the box & wire into the plug-in connector as shown.

### Notes.

(a) Secure each lead with one of the cable clamps on the control box cover.

(b) The mains lead connection MUST be made such that, should the lead slip from its anchorage, the current carrying conductors become taut before the earthing conductor.

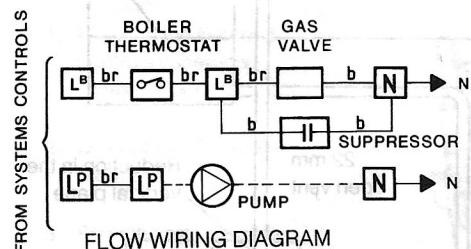


DETAIL OF TERMINAL STRIP

## 18 EXTERNAL CONTROLS

External wiring MUST be in accordance with the current I.E.E. Wiring Regulations.

The wiring diagrams shown in Frames 20 to 22 cover the systems likely to be used with this appliance. For wiring external controls to the Ideal Mexico Super 2 boiler, reference should be made to the system wiring diagram supplied by the relevant Manufacturer, in conjunction with the Flow wiring diagram & Frame 19. Difficulty in wiring should not arise, provided the following directions are observed.



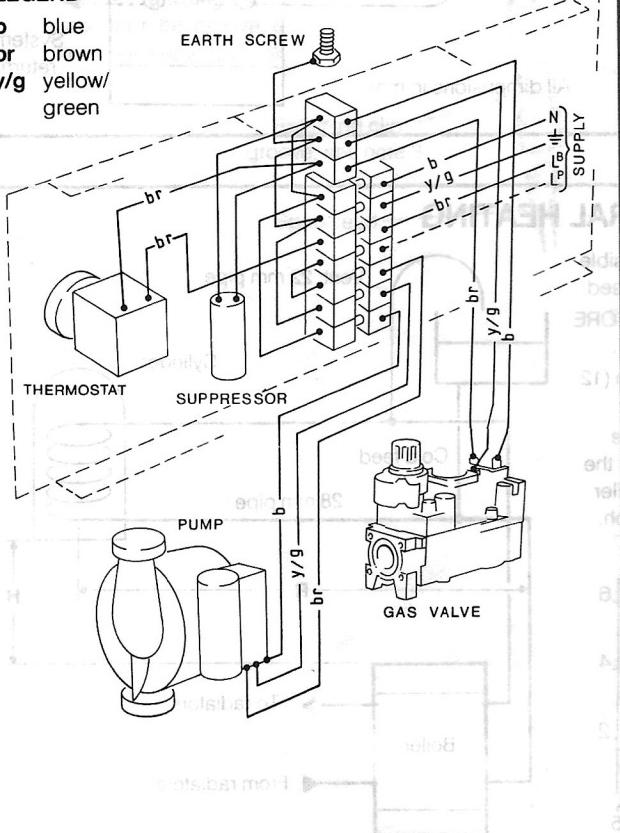
1. Controls that switch the system ON & OFF, e.g. a time switch MUST be wired in series, in the live mains lead to the boiler.
2. Controls that over-ride an ON/OFF control, e.g. a frost thermostat, MUST be wired into the mains lead in parallel with the control(s) to be over-ridden. Refer to Frame 23.
3. If a propriety system is used, follow the instructions supplied by the Manufacturer.

**Note:** If there are no external controls, the circulating pump MUST be wired into the control box.

## 19 PICTORIAL WIRING DIAGRAM

### LEGEND

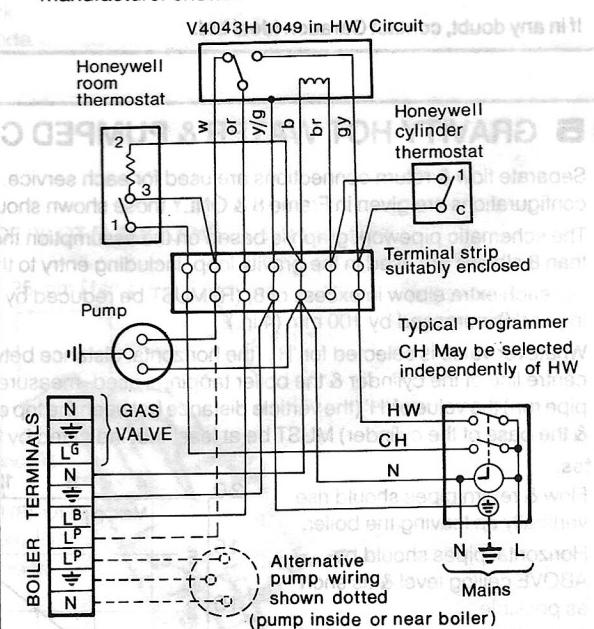
b blue  
br brown  
y/g yellow/green



## 20 HONEYWELL 'C' PLAN

Gravity H.W & pumped C.H.

1. Some earth wires are omitted for clarity. Ensure proper earth continuity when wiring.
2. Numbering of the thermostat terminals is specific to the manufacturer shown.



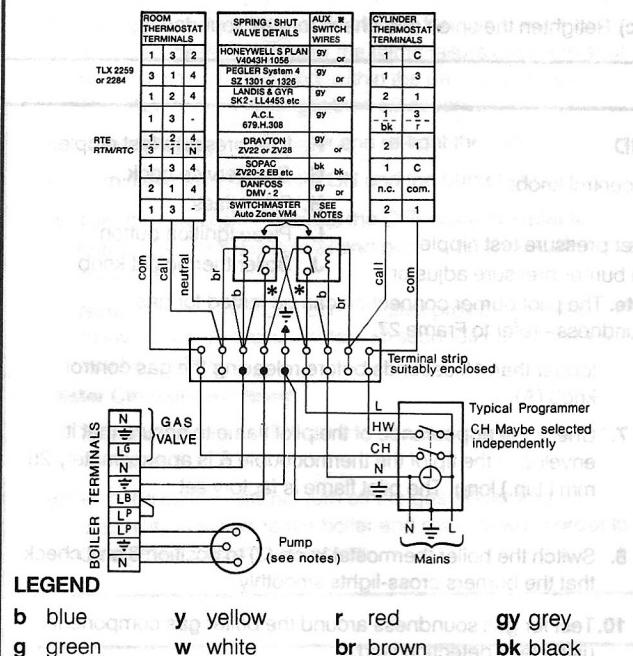
### LEGEND

b blue	w white
y yellow	r red
g green	br brown
bk black	gy grey
or orange	

## 21 TWO SPRING CLOSED VALVES

Pumped only

- Some earth wires are omitted for clarity. Ensure proper earth continuity when wiring.
- This is a fully controlled system, therefore set the boiler thermostat to its highest position.
- Numbering of thermostat terminals is specific to the manufacturer indicated.
- 'Switchmaster Autozone' valve also has grey & orange leads, but the ORANGE wire (not the grey wire) must be connected to the in-coming live supply.
- Black dots denote alternative pump connections.



## 23 FROST PROTECTION

Central Heating systems fitted inside the house do not normally require frost protection, since the house acts a 'storage heater' & can normally be left at least 24 hrs without frost damage. However, if parts of the pipework run outside the house, or if the boiler will be left off for more than a day or so, then a frost 'stat' should be wired into the system. This is usually done at the programmer, in which case the programme selector switches are set to 'OFF' & all other controls MUST be left in the running position. The frost 'stat' should be sited in a cold place, but where it can sense heat from the system. Wiring should be as shown, with minimal disturbance to other wiring of the programmer. Designation of the terminals will vary, but the programmer & thermostat manufacturer's leaflets will give full details.

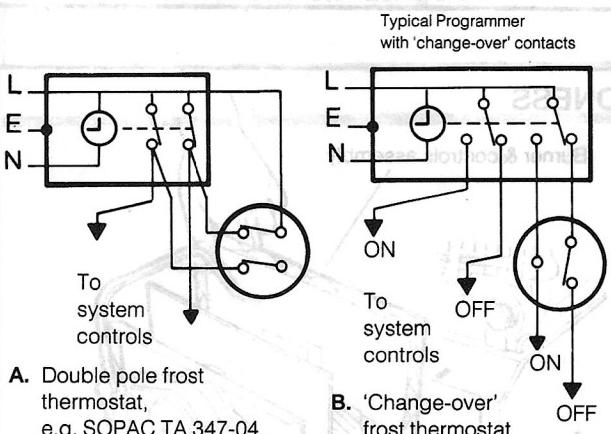


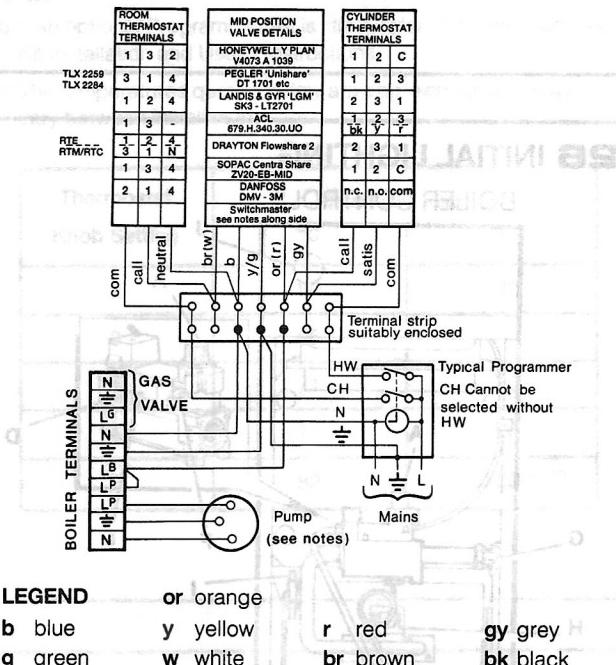
Diagram A shows a double pole frost 'stat', which should suffice for all systems not using the 'OFF' terminals of the programmer.

Diagram B shows a 'change-over' frost 'stat', which will cover most systems which use 'CH OFF'. However if the HW pipework is in an isolated part of the house, a 2nd frost 'stat' may be used to protect it. If in doubt, ask your Installer for advice.

## 22 MID POSITION VALVE

Pumped only

- Some earth wires are omitted for clarity. Ensure proper earth continuity when wiring.
- This is a fully controlled system, therefore set the boiler thermostat to its highest position.
- Numbering of thermostat terminals is specific to the manufacturer indicated.
- 'Switchmaster Midi' operates similarly, but the wiring is not identical- see the manufacturer's wiring diagram.
- Black dots denote alternative pump connections.



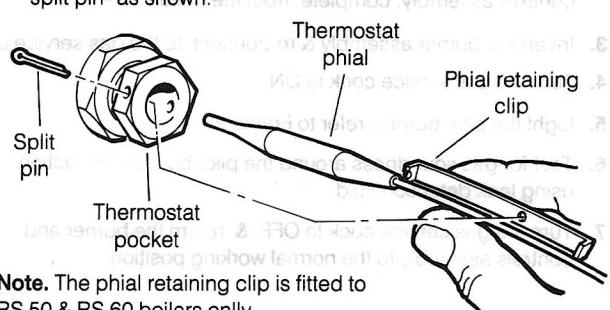
## 24 FITTING THE CASING

Refer to Frames 5 & 6 'Boiler Casing Removal' (pgs. 6 & 7) for illustration of the procedure detailed below.

- Offer up the R.H. side panel, locating it with the peg in the baseplate, & push the panel back.
- Secure the panel to the baseplate and the flue collector using the screws previously removed.
- Repeat steps 1 & 2 to refit the L.H. side panel.

**IMPORTANT.** Wiring within the boiler casing MUST be neatly secured with the cable straps provided & MUST NOT be allowed to touch the burner front plate, the cleanout cover or collector the hood.

- Place the top panel in position & push back.
- Secure the top panel to the side panels using the screws previously removed.
- Replace the control box cover & re-fit the control panel using the screws previously removed.
- Insert the thermostat phial & phial retaining clip (RS 50 & RS 60 ONLY) into the thermostat pocket. Take care NOT to kink the thermostat capillary as it is unwound & secure it with the split pin- as shown.



**Note.** The phial retaining clip is fitted to RS 50 & RS 60 boilers only

DETAIL OF THERMOSTAT POCKET

## 25 COMMISSIONING & TESTING

### (a) Electrical Installation

- Checks to ensure electrical safety should be carried out by a competent person.
- ALWAYS carry out the preliminary electrical system checks as detailed on the instructions for the British Gas Multimeter, or a similar test meter.

### (b) Gas Installation

- The whole of the gas installation, including the meter, should be inspected and tested for soundness, and purged in accordance with the recommendations of BS 6891:1988.

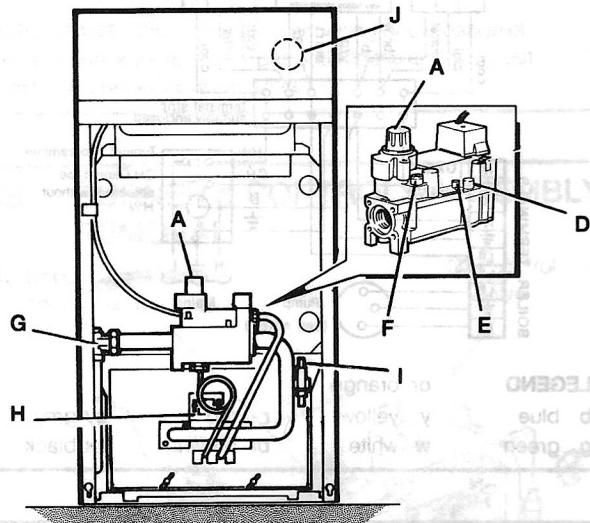
**WARNING:** Whilst effecting the required gas soundness test and purging air from the gas installation, open all windows and doors, extinguish naked lights and DO NOT SMOKE.

- Purging air from the gas installation may be expedited by loosening the union on the gas service cock and purging until gas is smelled.

- Retighten the union and check for gas soundness.

## 26 INITIAL LIGHTING

### BOILER CONTROLS



- Connect the gas valve electrical leads & refit the cover.
- Check that the gas service cock (G) is ON & the boiler thermostat knob (J) is OFF.
- Loosen the screw in the burner pressure test nipple (D) & connect a gas pressure gauge via a flexible tube.
- Turn the gas control knob (A) CLOCKWISE until resistance is felt and then release it.
- Push in & retain fully depressed the gas control knob (A). Press and release piezo ignition button (I) repeatedly until the pilot lights.
- Hold the gas control knob (A) depressed for 15 seconds after the pilot has ignited. If the pilot burner fails to remain alight at this stage repeat the procedure detailed above but wait

### LEGEND

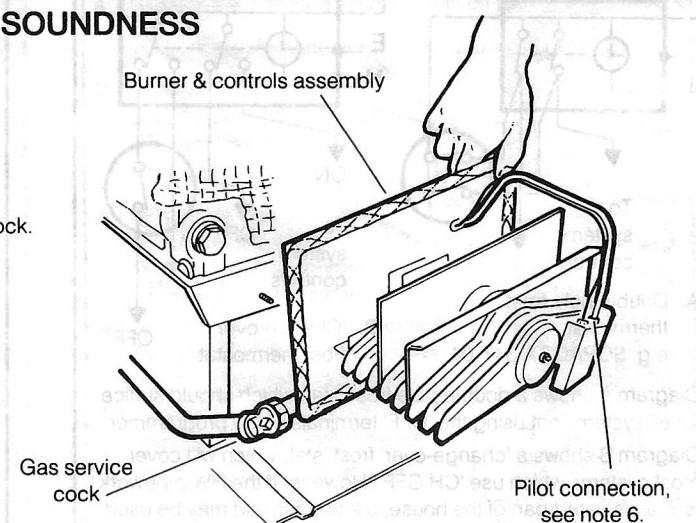
- A. Gas control knob.
- B. Burner pressure test nipple.
- C. Main burner pressure adjuster.
- D. Inlet pressure test nipple.
- E. Gas service cock.
- F. Sightglass.
- G. Piezo ignition button.
- H. Boiler thermostat knob.

**Note.** The pilot burner connection can be tested for gas soundness - refer to Frame 27.

- longer than 15 seconds before releasing the gas control knob (A).
- Check the appearance of the pilot flame to ensure that it envelopes the tip of the thermocouple & is approximately 25 mm (1 in.) long. The pilot flame is factory set
- Switch the boiler thermostat knob (J) to position 6 and check that the burners cross-lights smoothly.
- Test for gas soundness around the boiler gas components using leak detection fluid.
- Operate the boiler for 10 minutes to stabilise burner temperature. The boiler is pre-set at the factory to its maximum nominal rating but can be range rated to suit the system design requirements. Refer to Table 2, page 2. If the burner pressure setting requires adjustment, turn the pressure adjusting screw (E) ANTICLOCKWISE to decrease the pressure and CLOCKWISE to increase the pressure.
- Note.** Continual adjustment in either direction will produce the opposite effect.
- If the boiler output is set to MID or MINIMUM affix the appropriate indicator label, supplied, to the Data Plate (front of baseplate).
- Turn the boiler thermostat knob (J) to OFF.
- Remove the pressure gauge and tube. Retighten the screw in the pressure test nipple, ensuring that a gas-tight seal is made.

## 27 PILOT BURNER CONNECTION GAS SOUNDNESS

- Turn the gas service cock to OFF and undo the union nut.
- Remove the four wing nuts and withdraw the burner and controls assembly, complete, from the boiler.
- Invert the burner assembly & re-connect to the gas service cock.
- Turn the gas service cock to ON.
- Light the pilot burner- refer to Frame 26.
- Test for gas soundness around the pilot burner connection, using leak detection fluid.
- Turn the gas service cock to OFF, & return the burner and controls assembly to the normal working position.



## **28 GENERAL CHECKS**

Make the following checks for correct operation;

1. Turn the boiler thermostat OFF and ON to check that the main burner lights and extinguishes in response.
  2. Check that the programmer, if fitted, and all other system controls function correctly.  
Operate each control separately and check that the main burner or circulating pump, as the case may be, responds.

### **3. Flame Failure Device**

Check the operation of the flame failure device in the gas control valve as follows;

- (a) Extinguish the pilot flame by closing the gas service cock and note the time taken for the flame failure device to shut down, identified by a click within the gas control valve. This MUST NOT be longer than 60 seconds.
  - (b) Open the gas service cock and re-light the pilot.
  - (c) Turn the boiler thermostat ON and the burner should light.
  - (d) Turn the gas control knob to the OFF position - refer to Frame 26 The main burner and pilot flame should shut down immediately.

**Note:** A latch in the gas control valve provides a safety delay period of approximately 30 seconds before the boiler can be re-lit.

#### **4. Water Circulation System**

- (a) With the system HOT, examine all water connections for soundness.
  - (b) With the system still hot turn off the gas, water and electricity supplies to the boiler and drain down in order to complete the flushing process.

## **29 HANDING OVER**

After completing the installation and commissioning of the boiler system, the Installer should hand over to the Householder by the following actions:

1. Hand the User's Instructions to the Householder and explain his/ her responsibilities under the Gas Safety (Installation and Use) Regulations 1984.
  2. Draw attention to the Lighting Instruction label affixed to the inside of the controls door.
  3. Explain and demonstrate the lighting and shutting down procedures.
  4. The operation of the boiler and use or adjustment of ALL system controls should be fully explained to the Householder, to ensure the greatest possible fuel economy, consistent with household requirements of both heating and hot water consumption.

- c) Re-fill and vent the system, clear all air locks and again check for water soundness.
- d) Balance the system.

**Finally**

**Set the controls to the User's requirements, refit the lower front panel and close the controls door.**

### **Notes:**

- (a) If an optional Programmer Kit is fitted, refer to the Programmer Kit Installation and User's Instructions.
  - (b) The temperatures quoted below are approximate and may vary between installations.

Thermostat Knob Setting	Flow Temperature °C	Flow Temperature °F
2	60	140
3	66	150
4	71	160
5	77	170
6	82	180

Advise the User of the precautions necessary to prevent damage to the system, and to the building, in the event of the system remaining inoperative during frost conditions.

5. Explain the function and use of the boiler thermostat and external controls.
  6. Explain and demonstrate the function of time and temperature controls/ radiator valves, etc. for the economic use of the system.
  7. If an optional Programmer Kit is fitted, then draw attention to the Programmer Kit User's Instructions and hand them to the Householder.
  8. Stress the importance of regular servicing by the Local Gas Region or by a qualified Heating Engineer, and that a comprehensive service should be carried out AT LEAST ONCE A YEAR.

## 1 SCHEDULE

The following should be carried out at periods not exceeding one year.

- Light the boiler and carry out a pre-service check, noting any operational faults.
- Clean the main burner.
- Clean the heat exchanger.
- Clean the main injector.
- Check the condition of the thermocouple.
- Check that the flue terminal is unobstructed and that the flue system, including the flue cleanout cover, is sealed correctly.
- If the appliance has been installed in a compartment, check that the ventilation areas are clear.

The servicing procedures are covered more fully in frames 2 to 7 and must be carried out in sequence.

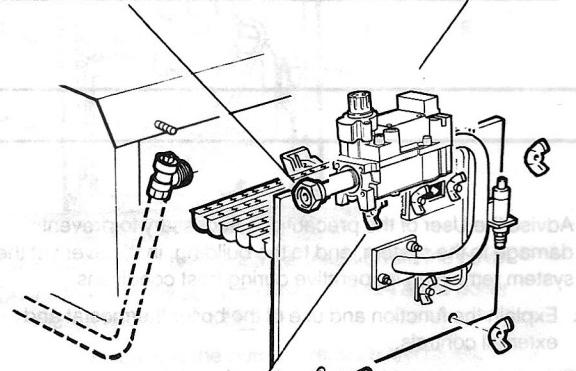
**WARNING.** Always turn OFF the gas supply at the gas service cock and switch OFF and DISCONNECT the electricity supply to the appliance BEFORE SERVICING.

**IMPORTANT.** After completing servicing or exchange of components always test for gas soundness and carry out functional checks as appropriate.

## 3 BURNER & CONTROLS ASSEMBLY REMOVAL

- Undo the gas service cock union nut.

Gas control valve



- Remove the four wing nuts and withdraw the burner and controls assembly, complete, from the boiler. Place on a convenient working surface.

## 4 CLEANING THE BURNER ASSEMBLY

- Brush off any deposits that may have fallen onto the burner head- ensure that the flame ports are unobstructed. Remove any debris that may have collected on the assembly.

**Note.** Brushes with metallic bristles MUST NOT be used.

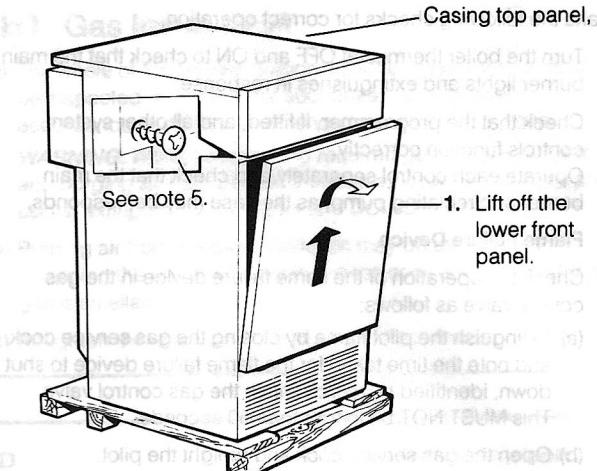
- Remove the main burner injector. Ensure that there is no blockage or damage & clean or renew as necessary.
- Refit the injector, using an approved jointing compound.
- Inspect the pilot, thermocouple and spark electrode; ensure that they are clean and in good condition.

In particular check that:

- The pilot burner is clean and unobstructed.
- The spark electrode is clean and undamaged.
- The spark lead is in good condition and securely connected.
- The spark gap is correct. Refer to Frame 12.
- The thermocouple tip is not burned or cracked.
- The position of the thermocouple relative to the pilot burner is correct. Refer to Frame 12.
- The thermocouple terminal at the gas valve is clean.

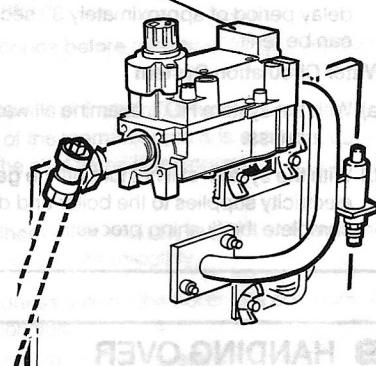
Clean or renew components as necessary.

## 2 BOILER CASING FRONT REMOVAL

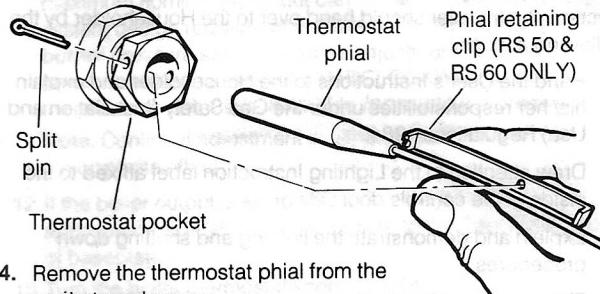


### VIEW OF GAS CONTROL VALVE (Behind the lower front panel)

- Remove the gas valve cover by undoing the retaining screw and disconnect the electrical leads.
- Release the gas valve lead from the retaining clip.



### DETAIL OF THERMOSTAT POCKET

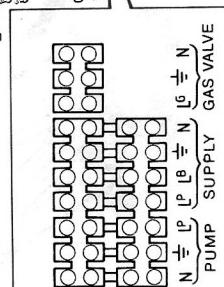


- Remove the thermostat phial from the pocket as shown.
- Remove the two screws securing the control panel and disengage the panel by lowering and pulling it forward.

### VIEW OF BOILER CONTROL BOX & TERMINAL WIRING

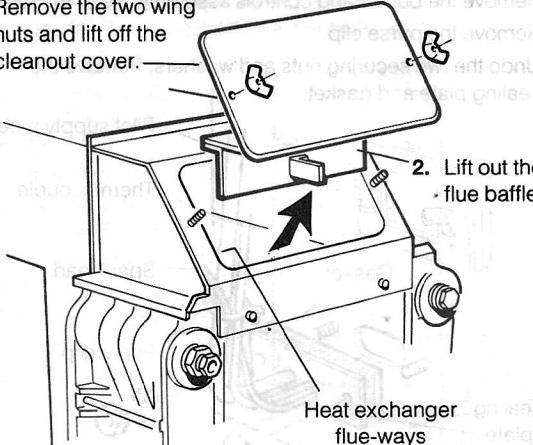
- Remove the securing screw and lift off the control box cover.

- Remove the plug-in connector and withdraw the electrical leads.
- Disconnect the programmer if fitted. Refer to the Programmer Installation Instructions.
- Release the two screws securing the programmer connection box to the back of the programmer.
- Disengage the box by unhooking the lugs from the slots.
- Place the control panel safely to one side.
- Remove the 2 securing screws & lift off the casing top panel.



**5 CLEANING THE FLUEWAYS**

1. Remove the two wing nuts and lift off the cleanout cover.
2. Lift out the flue baffles.
3. Remove all loose deposits from the heat exchanger, especially from between the fins, using a suitable brush. Remove all debris from the combustion chamber base.
4. Check that the flue outlet duct is unobstructed.

**6 RE-ASSEMBLY**

Re-assemble the boiler in the following order:

1. Replace the flue baffles into the boiler flueways ensuring that they are correctly repositioned. Refer to Frame 7 'Installation'.
2. Refit the flue cleanout cover renewing any damaged or deteriorating sealing gasket.
3. Refit the casing top panel.
4. Re-connect the electrical wiring and refit the controls panel, ensuring that the thermostat phial and phial retaining clip (RS 50 & RS 60 boilers ONLY) are correctly located in the thermostat pocket and secured by the split pin. Refer to Frame 2.
5. Check the sight-glass in the front plate. Clean or renew as necessary.
6. Renew any damaged or deteriorating front plate gasket.
7. Refit the burner and controls assembly.
8. Reconnect the gas service cock.

**7 GAS PRESSURE ADJUSTMENT****1. Pilot pressure**

Pilot adjustment is factory set to maximum and no adjustment is possible.

**2. Main burner pressure**

After servicing, reference should be made to Table 2, which quotes details of the rated output with the related burner pressure and heat input. Any required adjustments should be made using the pressure adjustment screw. Refer to 'Initial Lighting' Frame 26 - 'Installation'.

Finally, refit the lower front panel.

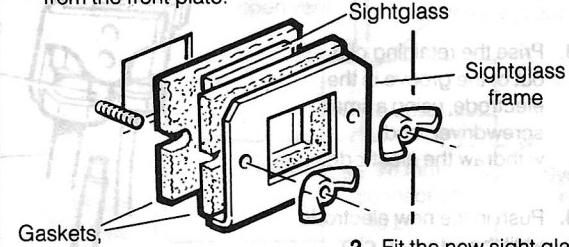
**COMPONENT REPLACEMENT**

To replace the components in Frames 8 to 18 the lower front panel must be removed. Refer to Frame 2.

For replacement of pumps or programmer units, refer to the Pump Kit or Programmer Kit Instructions.

**8 SIGHTGLASS REPLACEMENT**

1. Unfasten the two wing nuts & washers. Remove the assembly from the front plate.



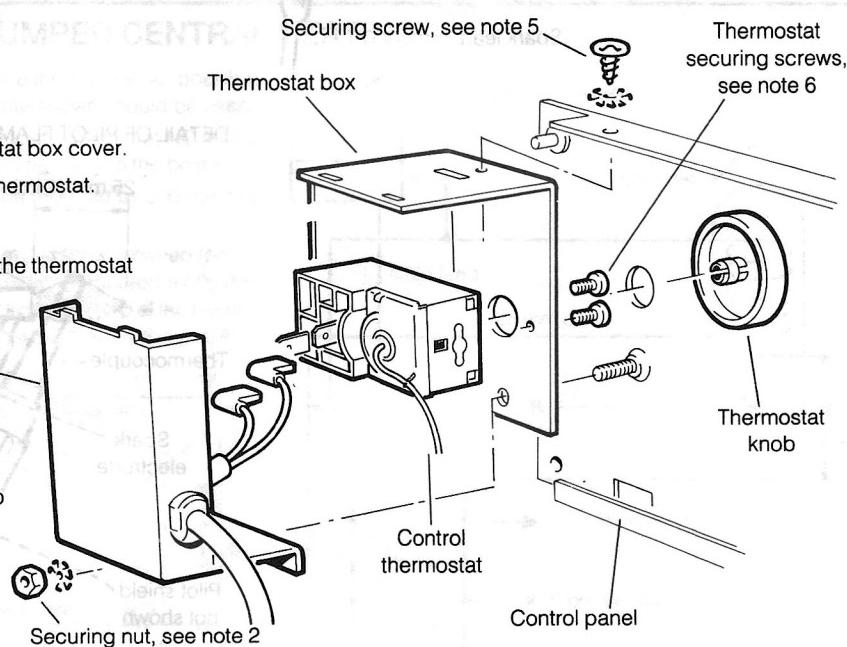
2. Fit the new sight glass & re-assemble as shown.

3. Retighten the two wing nuts to ensure an airtight seal, but DO NOT OVERTIGHTEN.

**9 CONTROL THERMOSTAT REPLACEMENT**

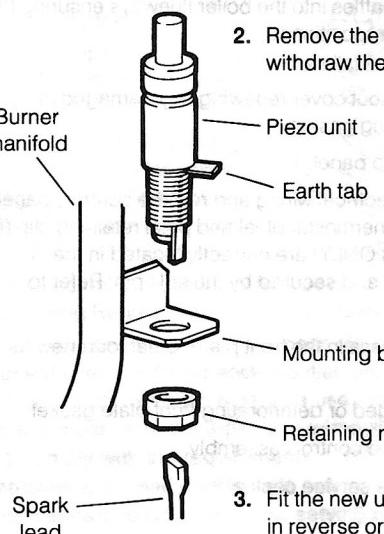
1. Remove the control panel. Refer to Frame 2.
2. Remove the securing nut & lift off the thermostat box cover.
3. Disconnect the two electrical leads from the thermostat.
4. Pull off the thermostat knob.
5. Remove the top securing screws & withdraw the thermostat box.
6. Remove the two securing screws & withdraw the thermostat.
7. Fit the new thermostat and re-assemble in reverse order, ensuring that:

- (a) The thermostat capillary is towards the top of the box.
- (b) The thermostat phial and phial retaining clip (RS 50 and RS 60 boilers ONLY) are in position in the thermostat pocket BEFORE securing with the split pin.



**10 PIEZO UNIT REPLACEMENT**

1. Disconnect the spark lead from the piezo unit body.

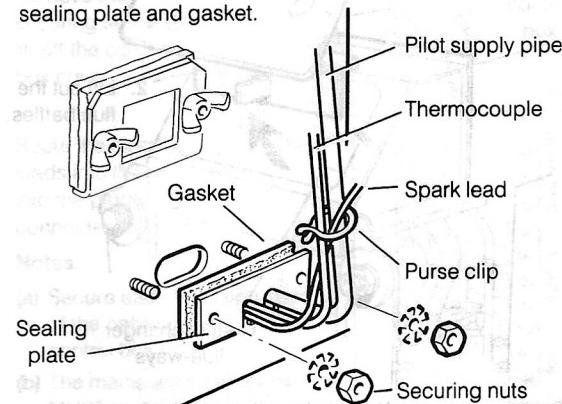


2. Remove the retaining nut and withdraw the unit as shown.

3. Fit the new unit and re-assemble in reverse order.

**11 SPARK LEAD REPLACEMENT**

1. Remove the burner and controls assembly. Refer to Frame 3.
2. Remove the purse clip.
3. Undo the two securing nuts and washers. Remove the sealing plate and gasket.

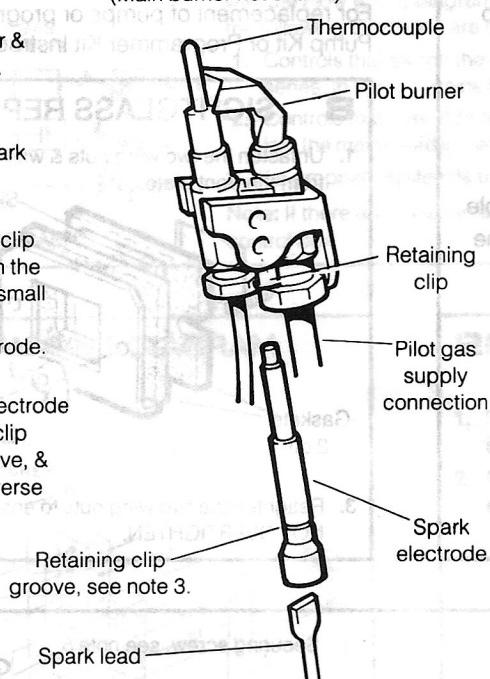


4. Disconnect the spark lead from the base of the electrode & the piezo unit and withdraw the lead.
5. Fit the new lead and re-assemble in reverse order.

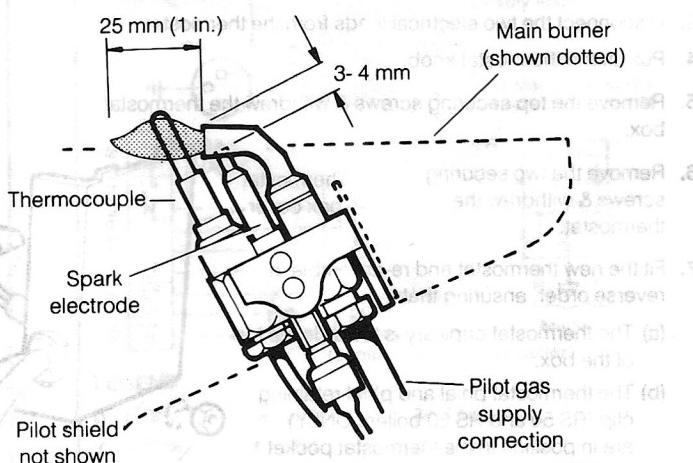
**12 SPARK ELECTRODE REPLACEMENT. Showing pilot flame length & spark gap**

**DETAIL OF PILOT BURNER ASSEMBLY**  
(Main burner not shown)

1. Remove the burner & controls assembly.  
Refer to Frame 3.
2. Disconnect the spark lead.
3. Prise the retaining clip out of the groove in the electrode, using a small screwdriver, and withdraw the electrode.
4. Push in the new electrode until the retaining clip locates in the groove, & re-assemble in reverse order.

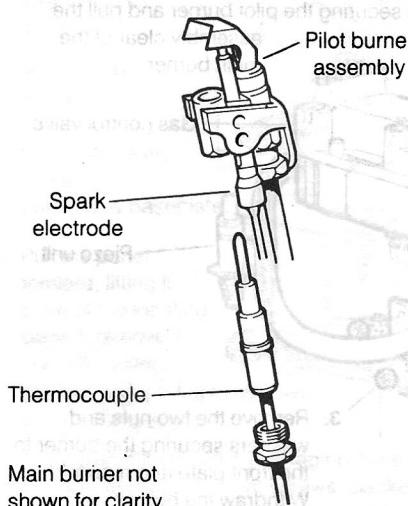


**DETAIL OF PILOT FLAME LENGTH & SPARK GAP**



## 13 THERMOCOUPLE REPLACEMENT

### DETAIL OF THERMOCOUPLE



1. Remove the burner and controls assembly. Refer to Frame 3.

2. Remove the spark electrode as detailed in Frame 12.

3. Remove the purse clip.

4. Undo the thermocouple connection at the pilot burner and pull the thermocouple clear.

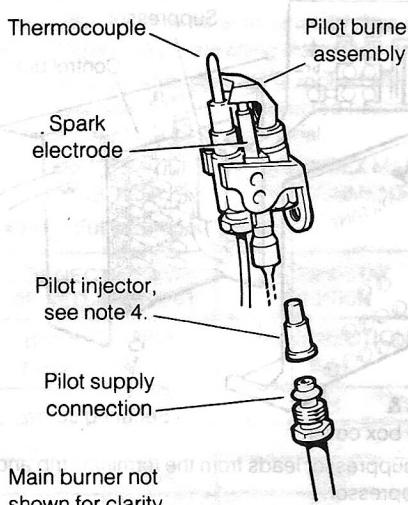
5. Undo the thermocouple connection at the gas valve.

6. Remove the sealing plate and gasket (refer to Frame 11) and withdraw the thermocouple.

7. Fit the new thermocouple and re-assemble in reverse order. **Note:** Avoid sharp bends in the thermocouple lead and ensure that it follows the same route as previously.

## 14 PILOT BURNER REPLACEMENT

### DETAIL OF PILOT BURNER



1. Remove the burner and controls assembly. Refer to Frame 3.

2. Remove the spark electrode. Refer to Frame 12.

3. Undo the thermocouple connection & pull the thermocouple clear. Refer to Frame 13.

4. Undo the pilot supply connection and ease clear of the pilot burner. DO NOT lose the pilot injector which is a push fit in the pilot burner housing.

5. Remove the two securing screws & washers and withdraw the pilot burner.

6. Fit the new pilot burner and re-assemble in reverse order ensuring that:

- (a) The injector is in position when refitting the pilot supply.

- (b) A gas-tight joint is made.

- (c) The spark gap is correct. Refer to Frame 12.

## 15 GAS VALVE REPLACEMENT

1. Remove the burner and controls assembly. Refer to Frame 3.

2. Undo the pilot supply connection.

3. Undo the thermocouple connection.

4. Unscrew the gas inlet pipe from the valve.

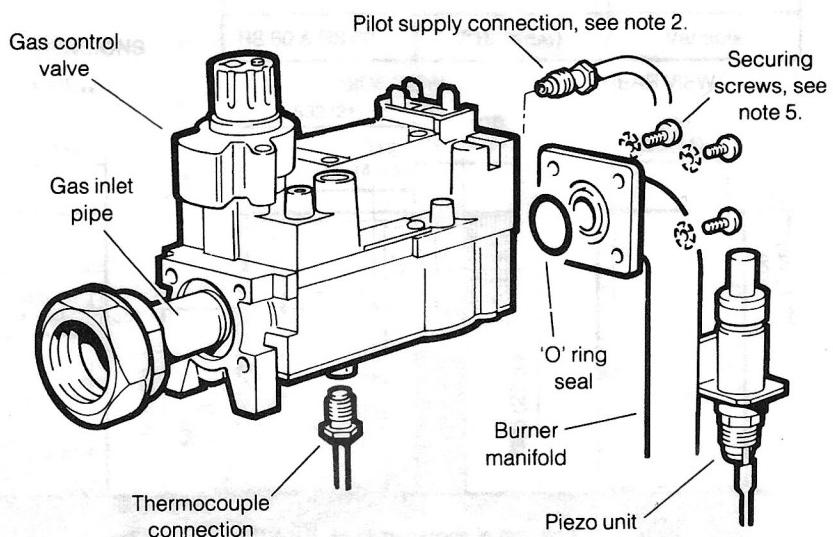
5. Remove the 4 securing screws and withdraw the valve from the burner manifold.

6. Fit the new gas valve ensuring that

- (a) The valve is fitted the right way round - an arrow engraved on the valve indicates the direction of flow.

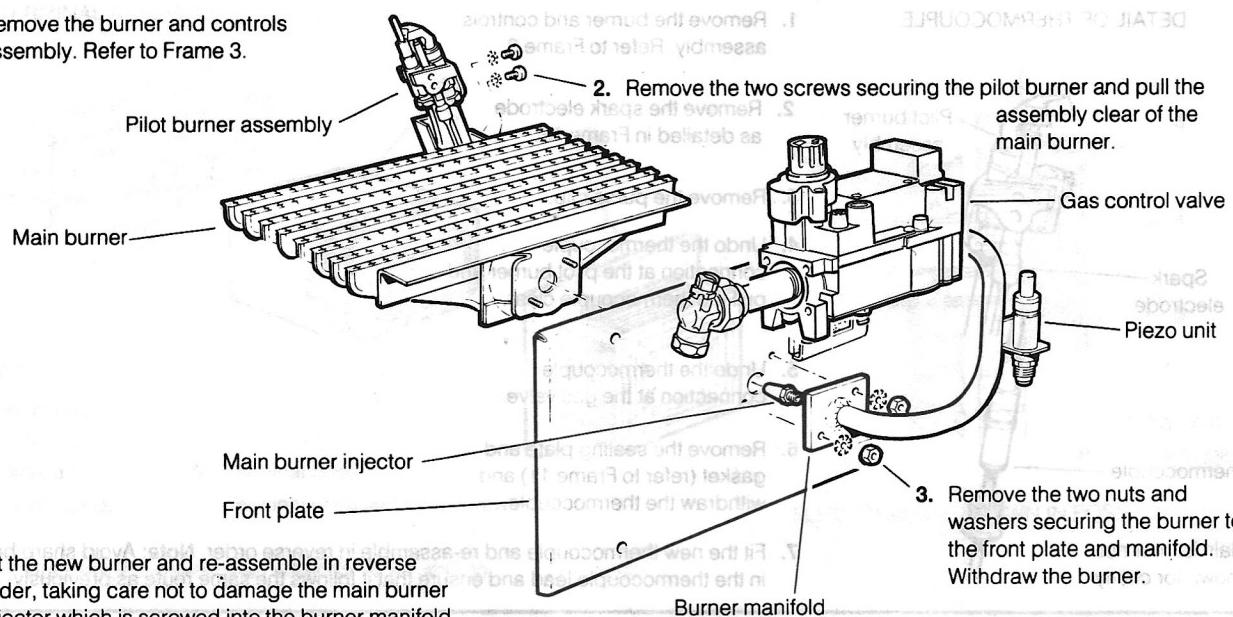
- (b) The sealing 'O' rings supplied with the valve are correctly fitted at the inlet and outlet flanges.

- (c) An approved jointing compound is used when re-connecting the gas inlet pipe.



## 16 MAIN BURNER REPLACEMENT

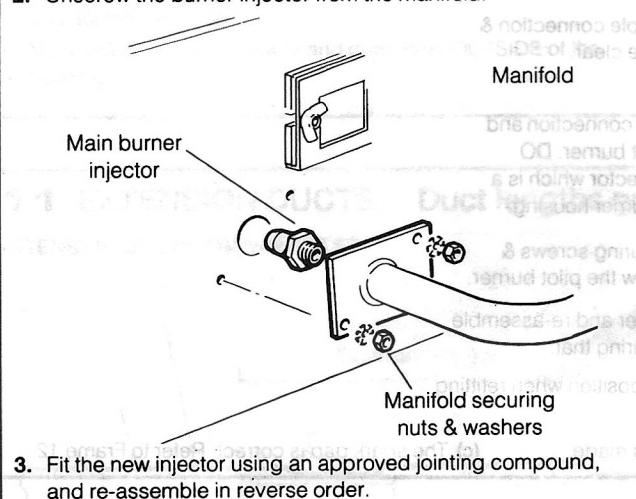
1. Remove the burner and controls assembly. Refer to Frame 3.



4. Fit the new burner and re-assemble in reverse order, taking care not to damage the main burner injector which is screwed into the burner manifold.

## 17 MAIN BURNER INJECTOR REPLACEMENT

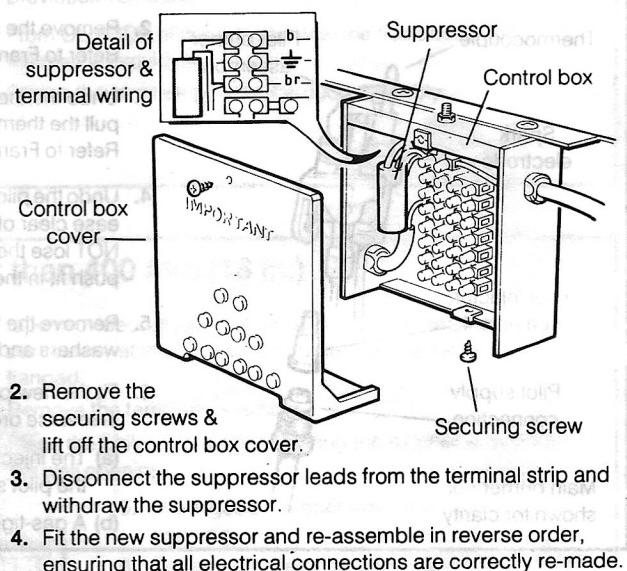
1. Remove the burner and controls assembly. Refer to Frame 3.
2. Unscrew the burner injector from the manifold.



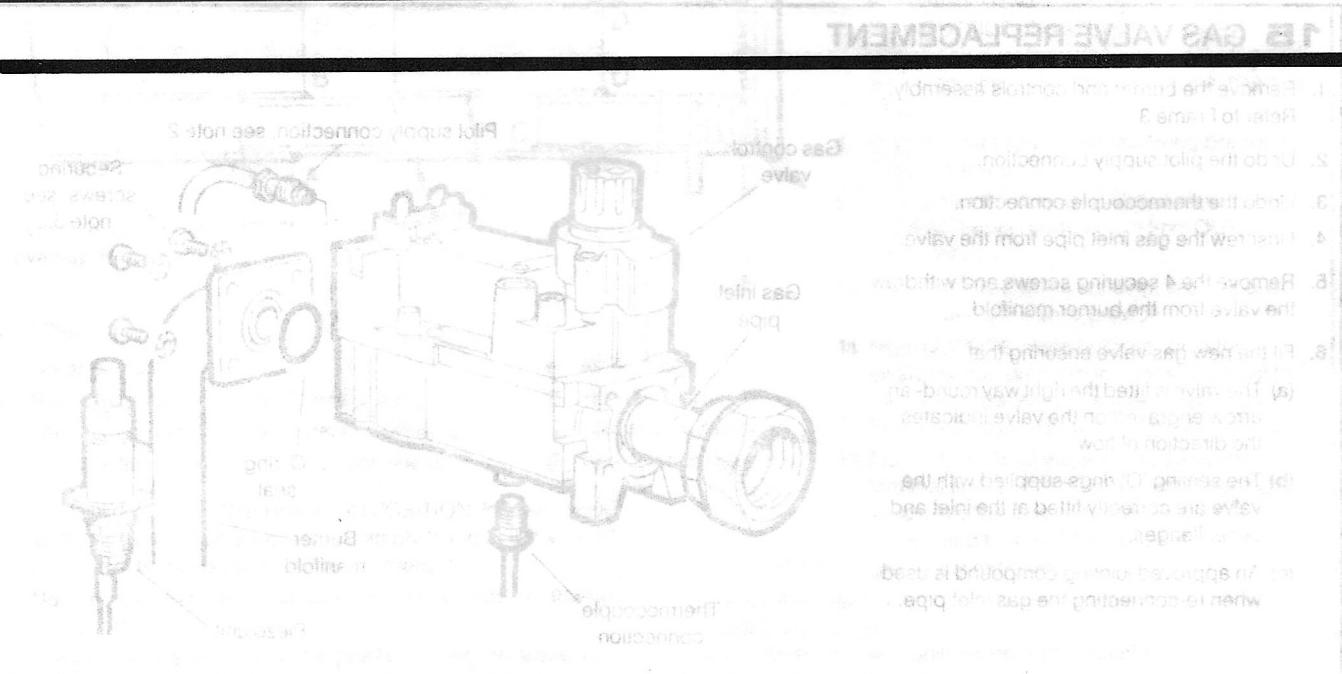
3. Fit the new injector using an approved jointing compound, and re-assemble in reverse order.

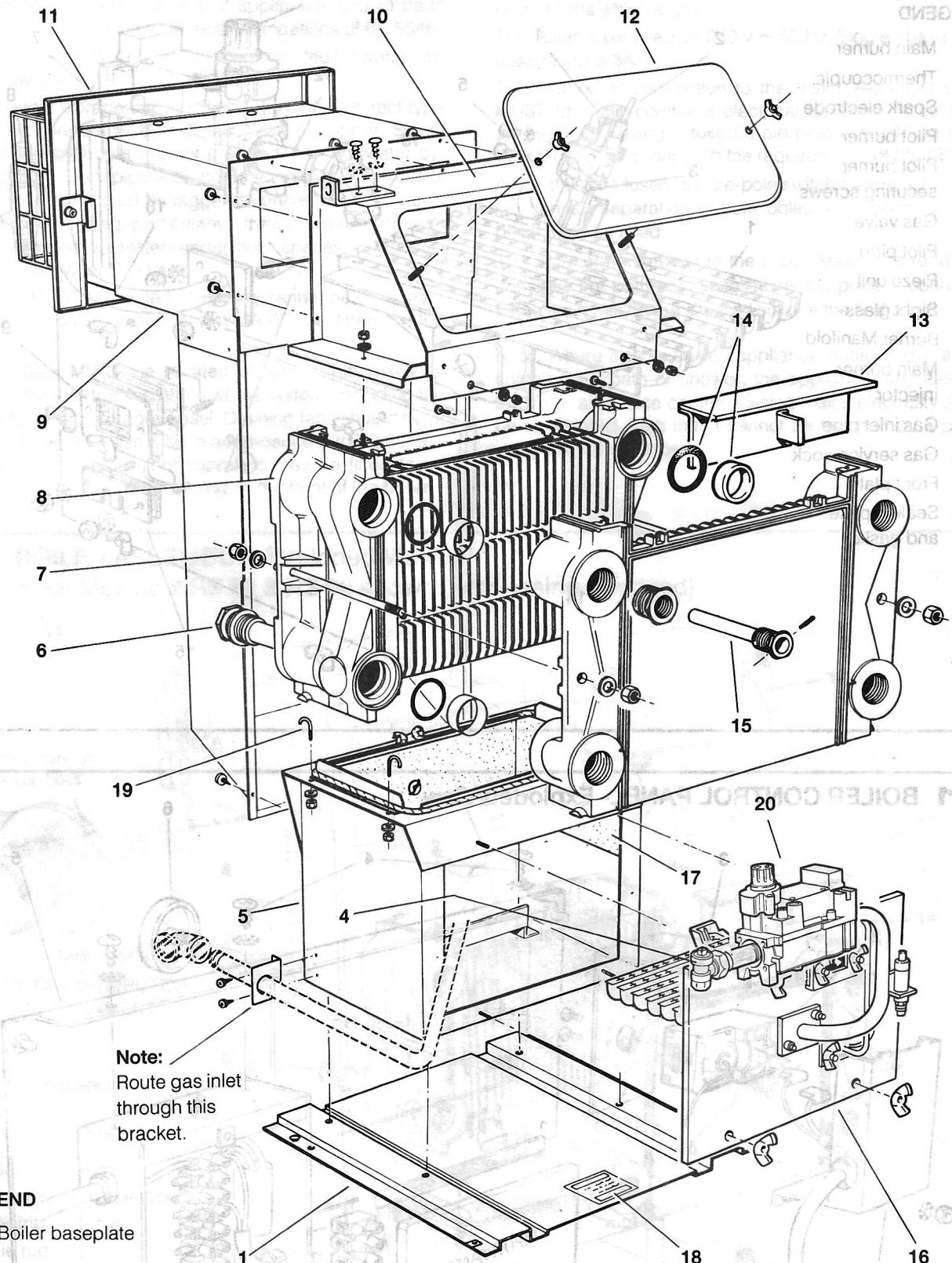
## 18 SUPPRESSOR REPLACEMENT

1. Remove the control panel. Refer to Frame 2.

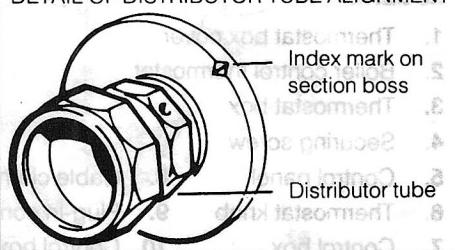


2. Remove the securing screws & lift off the control box cover.
3. Disconnect the suppressor leads from the terminal strip and withdraw the suppressor.
4. Fit the new suppressor and re-assemble in reverse order, ensuring that all electrical connections are correctly re-made.



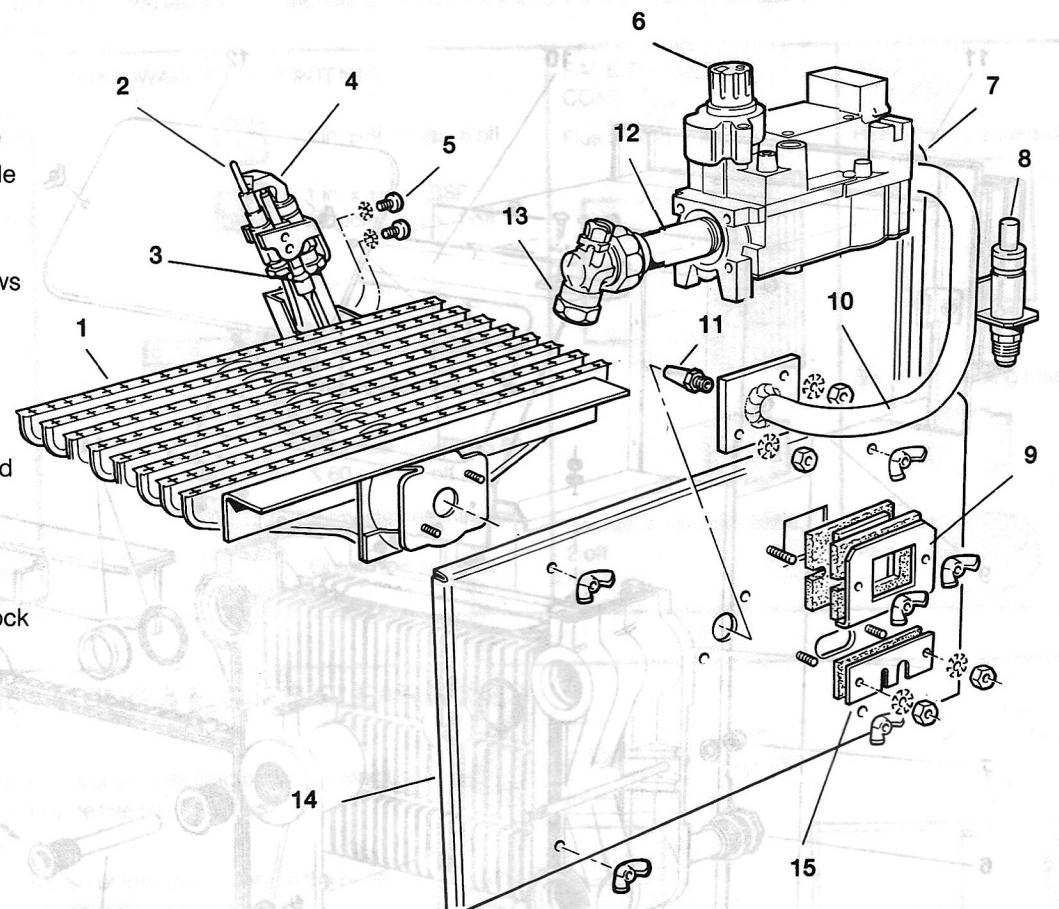
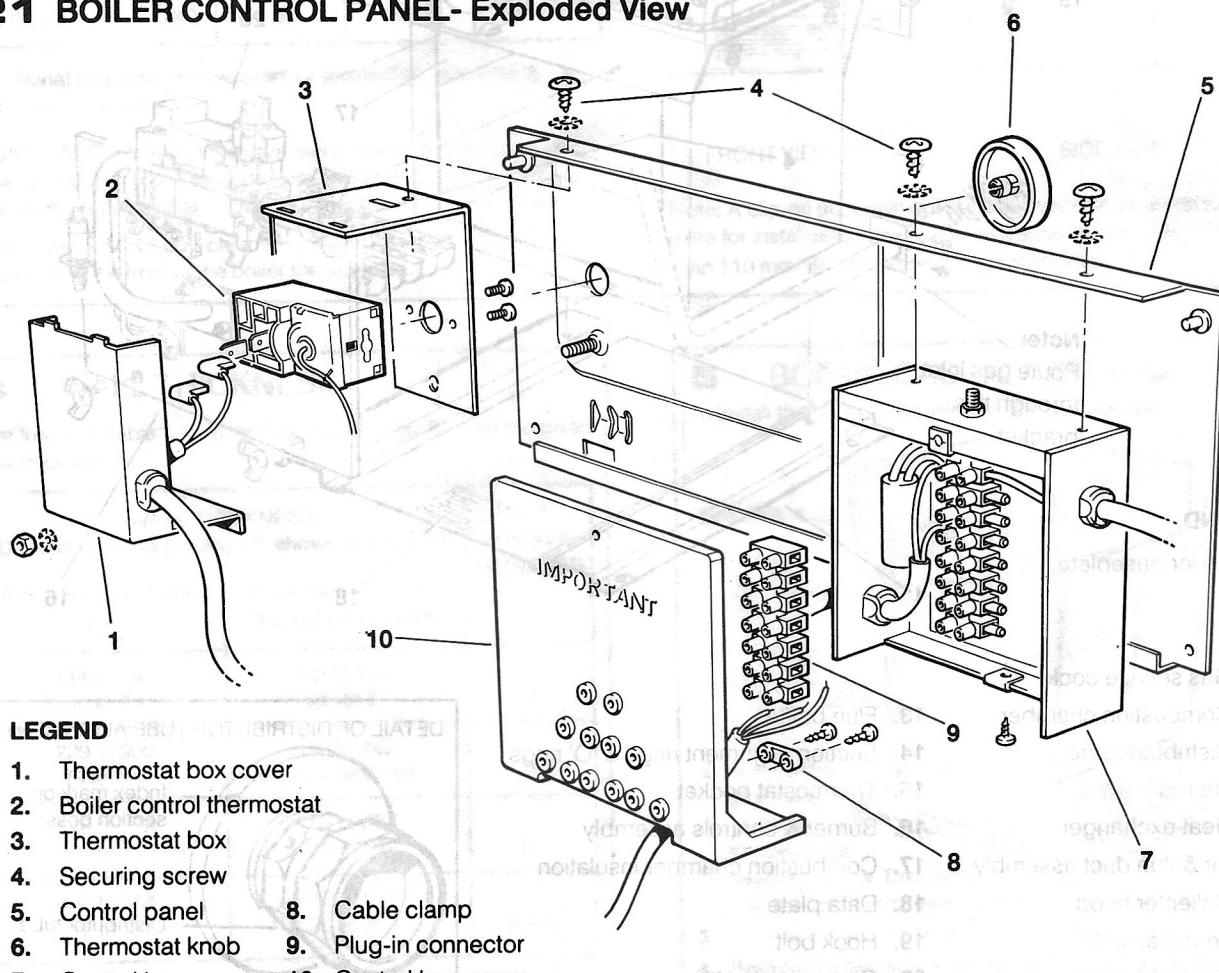
**19 BOILER ASSEMBLY- Exploded View.** Ideal Mexico Super 2 RS 50/ RS 60 shown
**LEGEND**

- 1. Boiler baseplate
- 4. Gas service cock
- 5. Combustion chamber
- 6. Distributor tube
- 7. Tie rod
- 8. Heat exchanger
- 9. Air & flue duct assembly
- 10. Collector hood
- 11. Terminal grille
- 12. Cleanout cover
- 13. Flue baffle
- 14. Section alignment rings & 'O' rings
- 15. Thermostat pocket
- 16. Burner & controls assembly
- 17. Combustion chamber insulation
- 18. Data plate
- 19. Hook bolt
- 20. Gas control valve

**DETAIL OF DISTRIBUTOR TUBE ALIGNMENT**

**20 BURNER & CONTROLS ASSEMBLY- Exploded View****LEGEND**

1. Main burner
2. Thermocouple
3. Spark electrode
4. Pilot burner
5. Pilot burner securing screws
6. Gas valve
7. Pilot pipe
8. Piezo unit
9. Sight glass
10. Burner Manifold
11. Main burner injector
12. Gas inlet pipe
13. Gas service cock
14. Front plate
15. Sealing plate and gasket

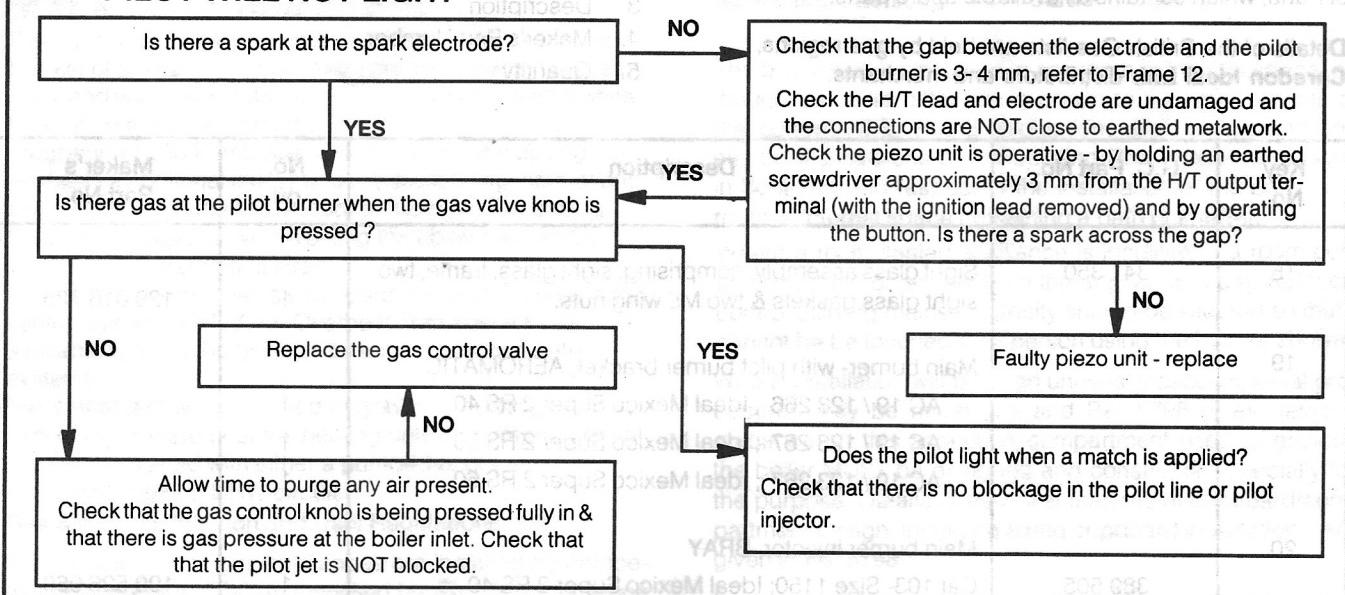
**21 BOILER CONTROL PANEL- Exploded View****LEGEND**

1. Thermostat box cover
2. Boiler control thermostat
3. Thermostat box
4. Securing screw
5. Control panel
6. Thermostat knob
7. Control box
8. Cable clamp
9. Plug-in connector
10. Control box cover

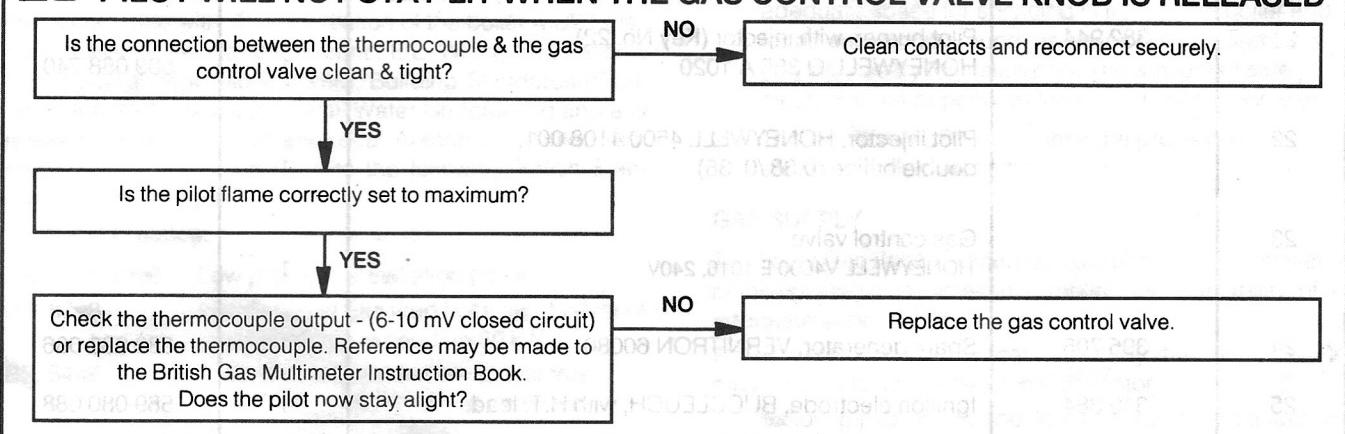
Before attempting any electrical fault finding, ALWAYS carry out the preliminary electrical system checks as detailed in the Instructions for the British Gas Multimeter, or other similar commercially

available meter. Detailed instructions on the cleaning & adjustment or replacement of faulty components are contained in the 'Servicing' section, of this publication.

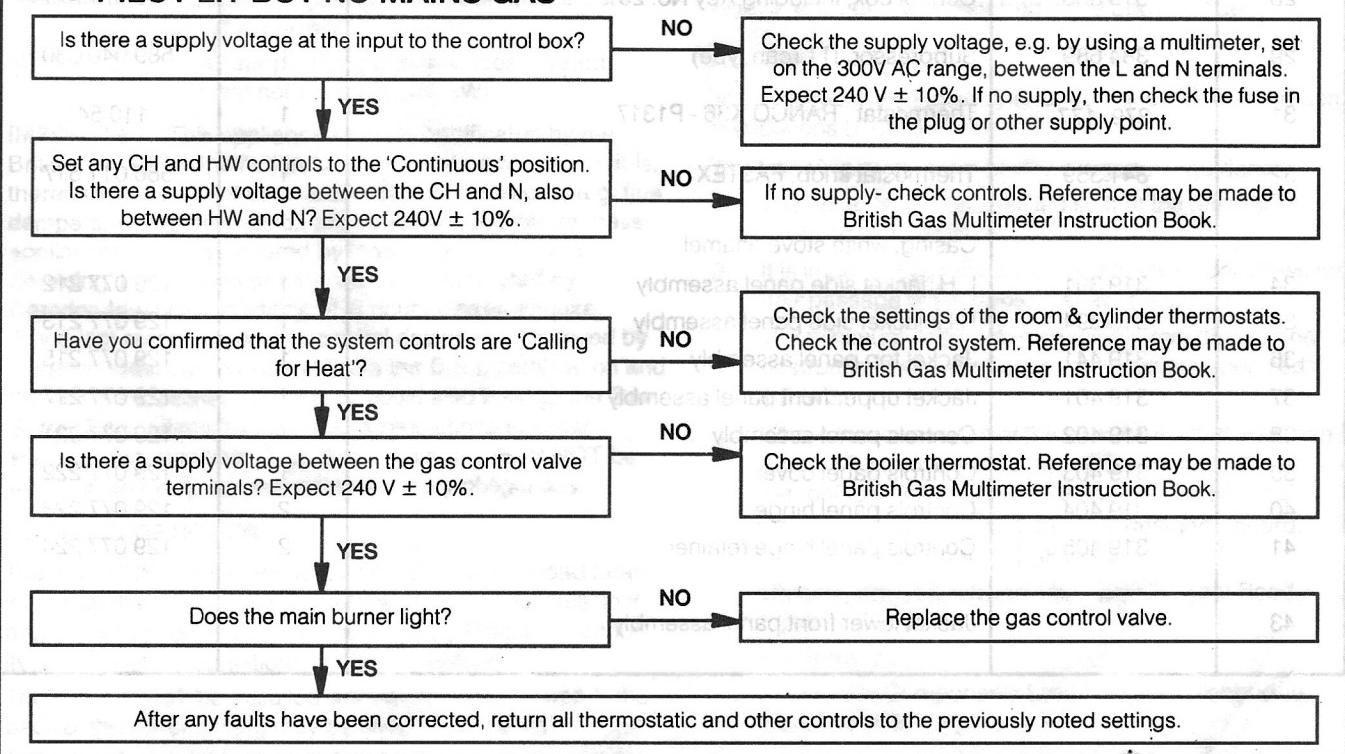
## 22 PILOT WILL NOT LIGHT



## 23 PILOT WILL NOT STAY LIT WHEN THE GAS CONTROL VALVE KNOB IS RELEASED



## 24 PILOT LIT BUT NO MAINS GAS



# SERVICING

# SHORT LIST OF PARTS

The following list comprises parts commonly required as replacements due to damage, expendability, or such that their failure, or absence, is likely to affect safety or performance. This List is extracted from the British Gas List of Parts, which contains all available spare parts.

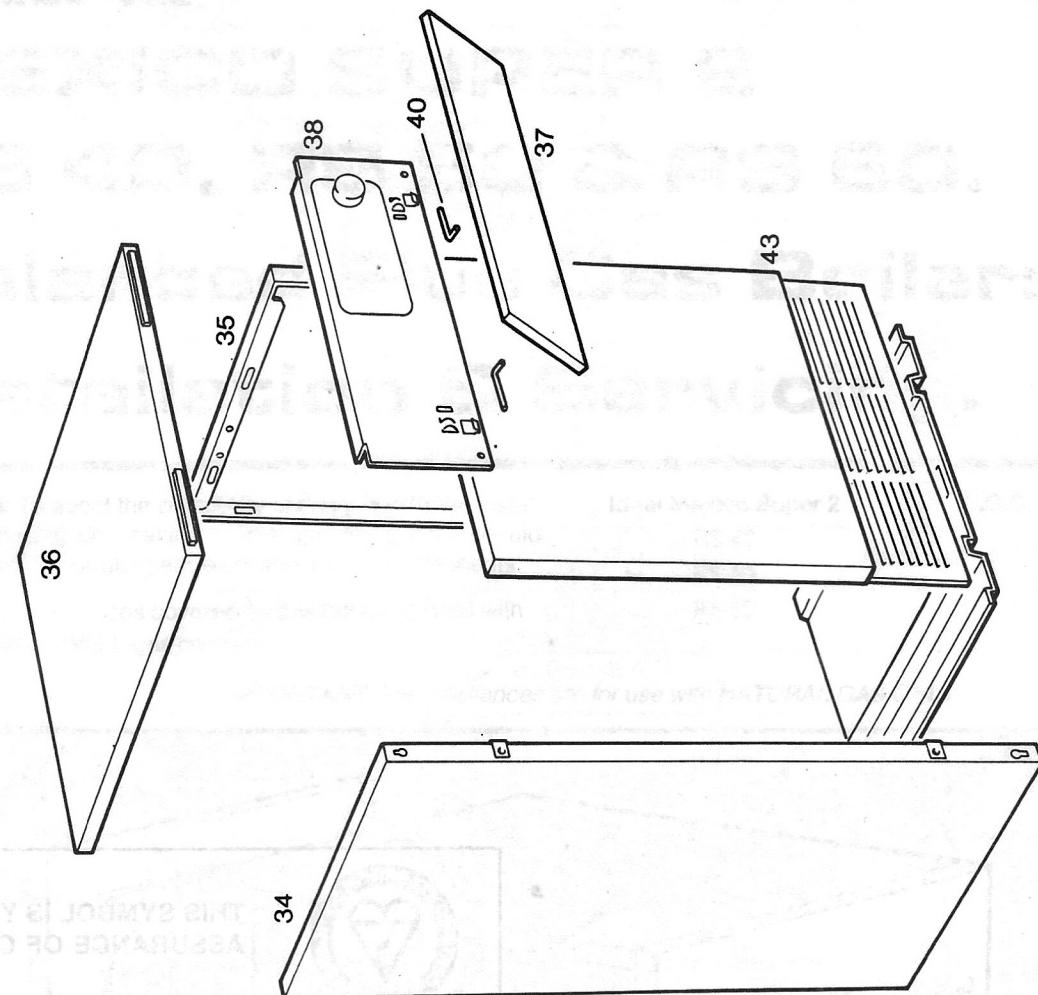
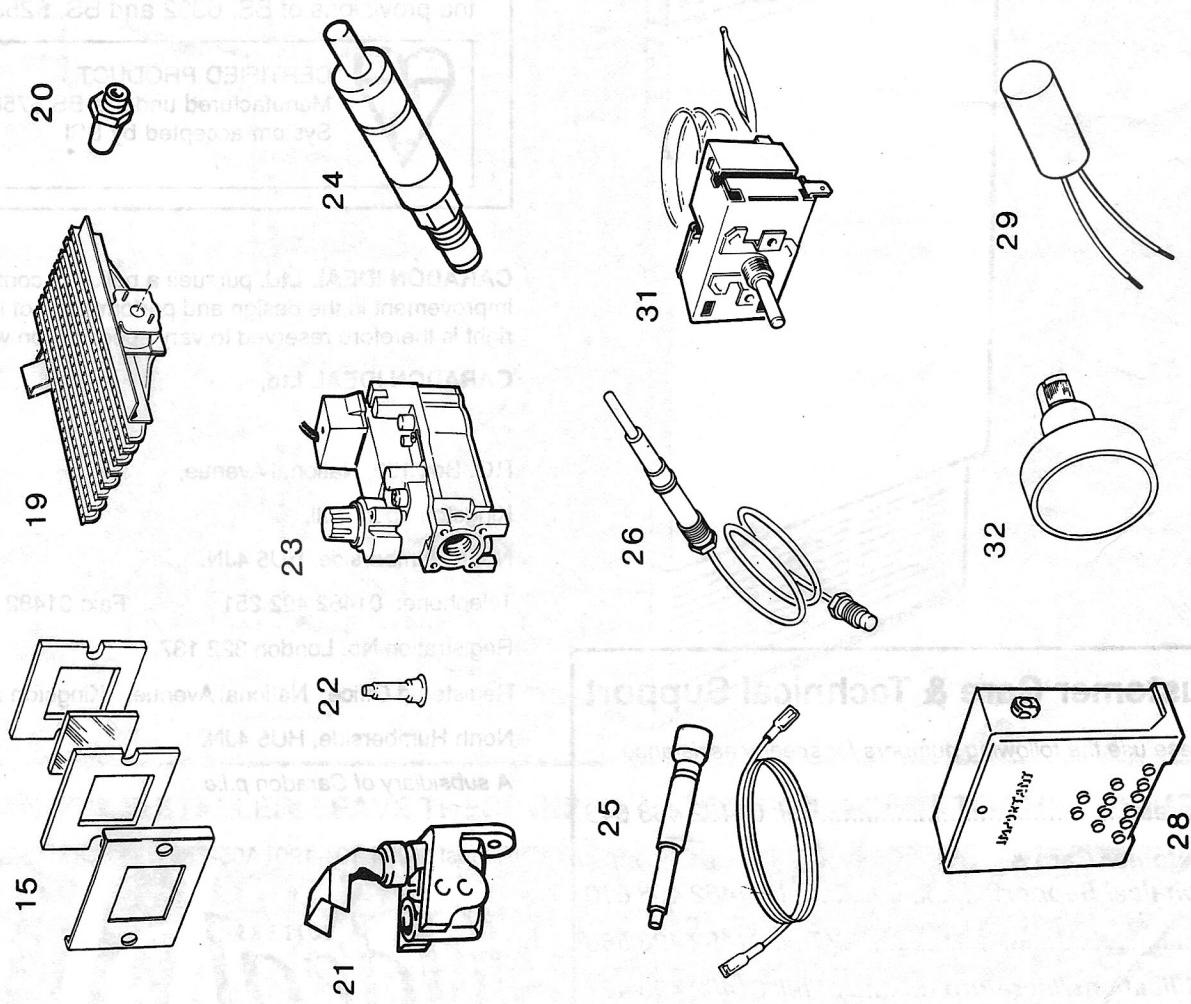
Details of the British Gas lists are held by gas regions, Caradon Ideal Ltd. distributors and merchants.

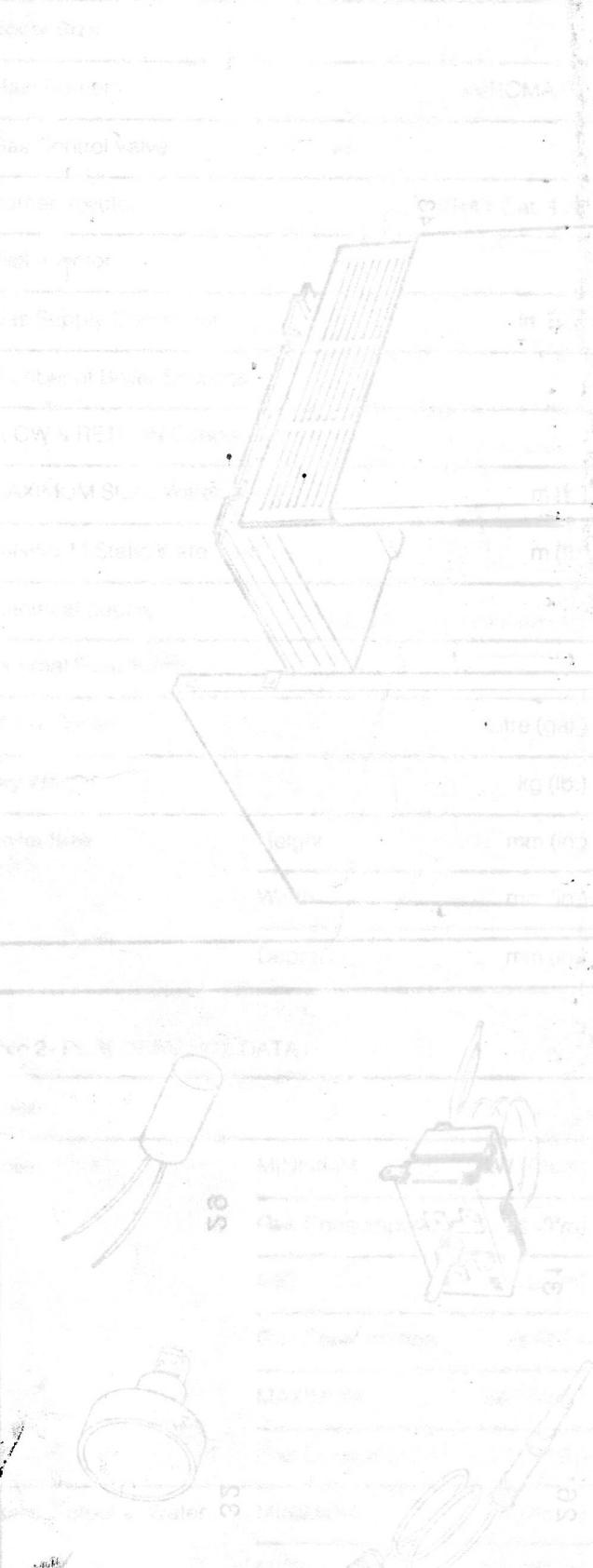
## Ideal Mexico Super 2 RS 40, RS 50 & RS 60 Gas Boilers

When ordering spares, please quote:

1. Boiler Model
2. Appliance G.C. Number
3. Description
4. Maker's Part Number
5. Quantity

Key No.	G.C. Part No.	Description	No. off	Maker's Part No.
15	341 350	Sight glass assembly, comprising, sight glass, frame, two sight glass gaskets & two M5 wing nuts.	1	129 018 725
19		Main burner- with pilot burner bracket, AEROMATIC AC 19 / 123 266 ; Ideal Mexico Super 2 RS 40 AC 19 / 123 267 ; Ideal Mexico Super 2 RS 50 AC 19 / 123 267 ; Ideal Mexico Super 2 RS 60	1 1 1	
20	389 505	Main burner injector, BRAY Cat 103- Size 1150; Ideal Mexico Super 2 RS 40	1	199 526 060
	389 506	Cat 103- Size 1500; Ideal Mexico Super 2 RS 50	1	199 536 060
	389 511	Cat 103- Size 1800; Ideal Mexico Super 2 RS 60	1	199 446 069
21	382 944	Pilot burner, with injector (Key No. 22) HONEYWELL Q 385 A 1020	1	589 088 740
22		Pilot injector, HONEYWELL 4500 4108 001, double orifice (0.38 / 0.36)	1	
23		Gas control valve, HONEYWELL V4600 E 1016, 240V	1	
24	395 705	Spark generator, VERNITRON 60080	1	589 830 086
25	319 384	Ignition electrode, BUCCLEUCH, with H.T. lead.	1	589 080 088
26	390 083	Thermocouple, HONEYWELL Q 309 A 2747; 750 lg.	1	581 861 906
28	319 385	Control box, including Key No. 29	1	586 071 271
29	384 689	Suppressor, ITT (can type)	1	589 040 030
31	379 177	Thermostat , RANCO K36 - P1317	1	110 541
32	341 359	Thermostat knob, FASTEX	1	586 011 517
		Casing, white stove enamel		
34	319 391	L.H. jacket side panel assembly	1	129 077 212
35	319 394	R.H. jacket side panel assembly	1	129 077 213
36	319 441	Jacket top panel assembly	1	129 077 215
37	319 401	Jacket upper front panel assembly	1	129 077 217
38	319 402	Controls panel assembly	1	129 077 221
39	319 403	Controls panel cover	1	129 077 222
40	319 404	Controls panel hinge	2	129 077 223
41	319 405	Controls panel hinge retainer	2	129 077 224
43		Jacket lower front panel assembly	1	

**26 BOILER CASING ASSEMBLY - Exploded View****25 SMALL PARTS**



**THIS SYMBOL IS YOUR  
ASSURANCE OF QUALITY**

These appliances are designed for use with Natural Gas only. They have been tested and conform with the provisions of BS. 6332 and BS. 5258.



**CERTIFIED PRODUCT**  
Manufactured under a BS 5750 Quality  
System accepted by BSI

**CARADON IDEAL Ltd.** pursues a policy of continuing improvement in the design and performance of its products. The right is therefore reserved to vary specification without notice.

**CARADON IDEAL Ltd.,**

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Registration No. London 322 137.

Registered Office; National Avenue, Kingston upon Hull,  
North Humberside, HU5 4JN.

*A subsidiary of Caradon p.l.c*

August 1994 101 190 A05

**iIdeal** BOILERS

## Customer Care & Technical Support

Please use the following numbers for speedy assistance.

**Spares** ..... Tel: 01482 498 643

**Customer Care &  
Technical Support** ..... Tel: 01482 498 610

..... Fax: 01482 498 666

**Publications/literature** ..... Tel: 01482 498 467